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FRESH-WATER ALGÆ.

EXCLUSIVE OF

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BY

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Author of "Handbook of British Fungi," "Mycographia," "Illustrations of British Fungi," &c., &c.

I. PALMELLACEÆ.

WILLIAMS AND NORGATE,
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1882.

H. W. BURLEY, PRINTER, LEWES.

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VOL. II.

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Eremosphæra viridis. DBy.

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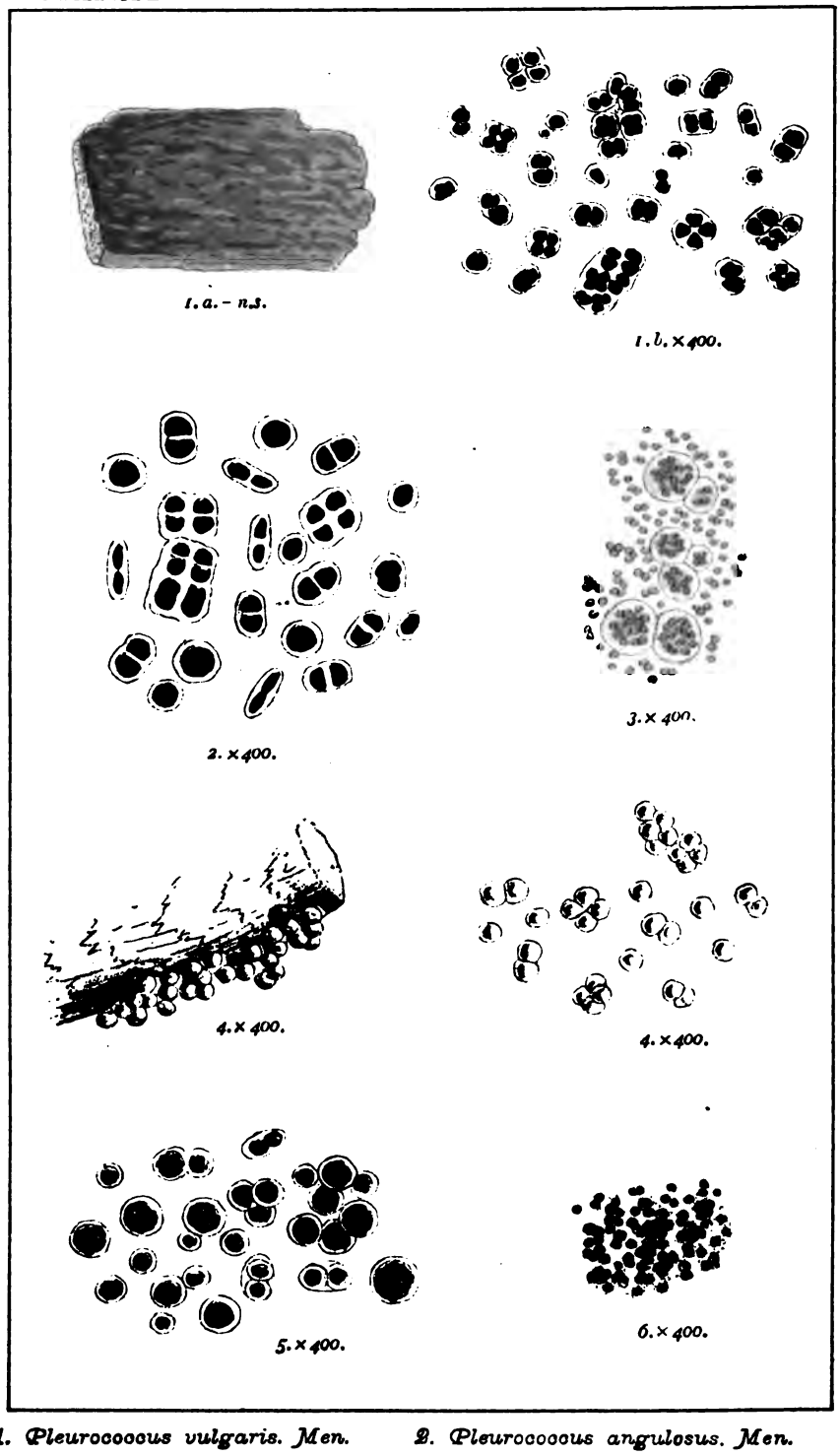

1. *Pleurococcus vulgaris. Men.*
2. *Pleurococcus angulosus. Men.*
3. *Pleurococcus mucosus. Kutz.*
4. *Pleurococcus Beigelii. Kuch.*
5. *Pleurococcus miniatus. Kutz.*
6. *Pleurococcus roseo-persicinus. Kutz*

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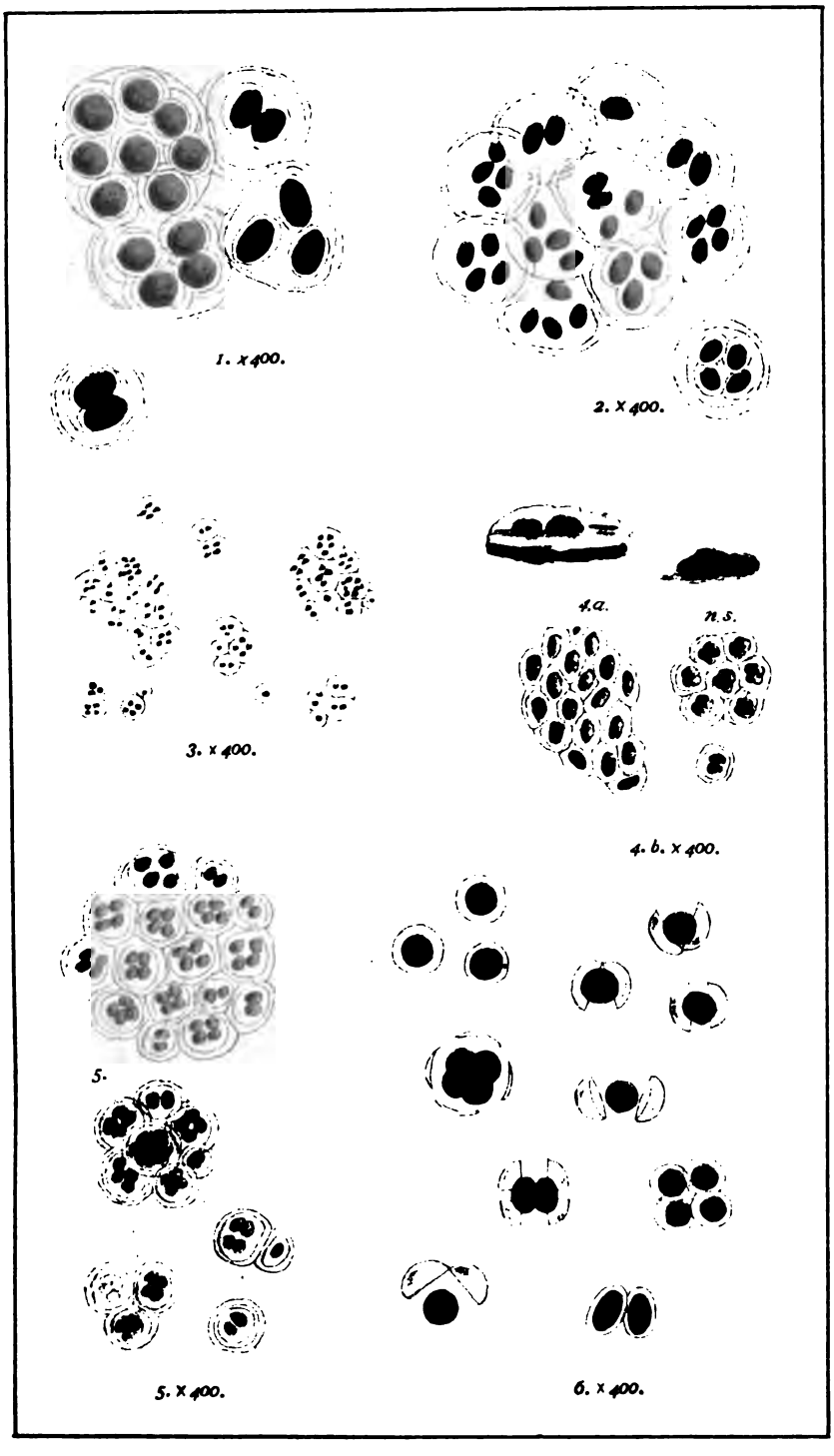
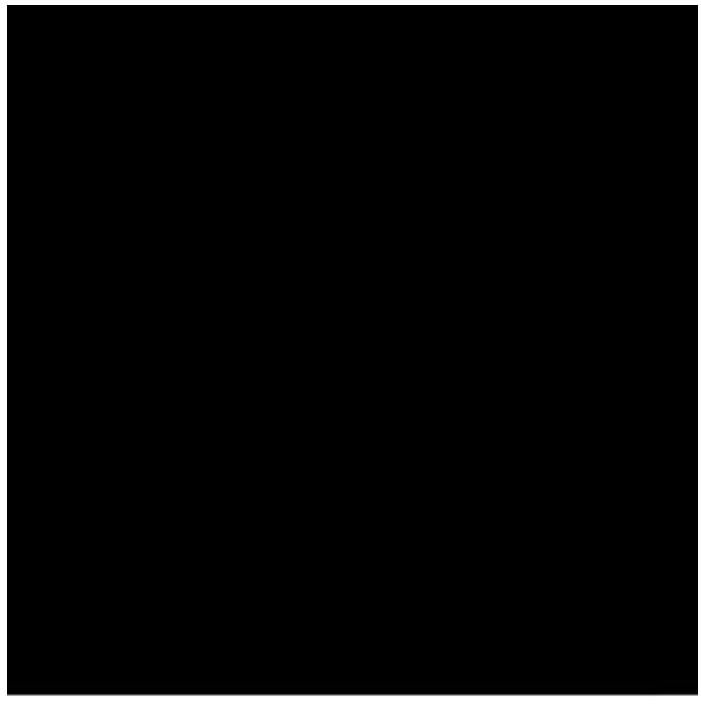
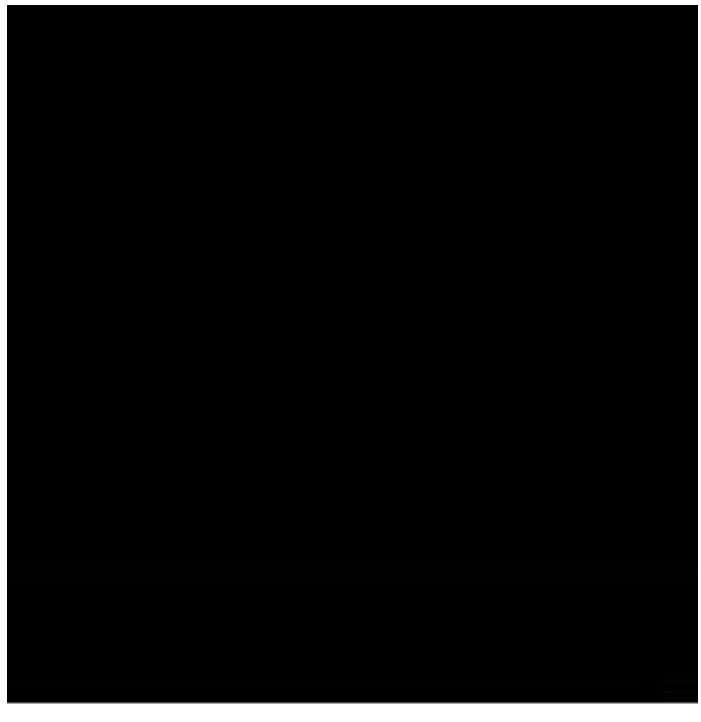
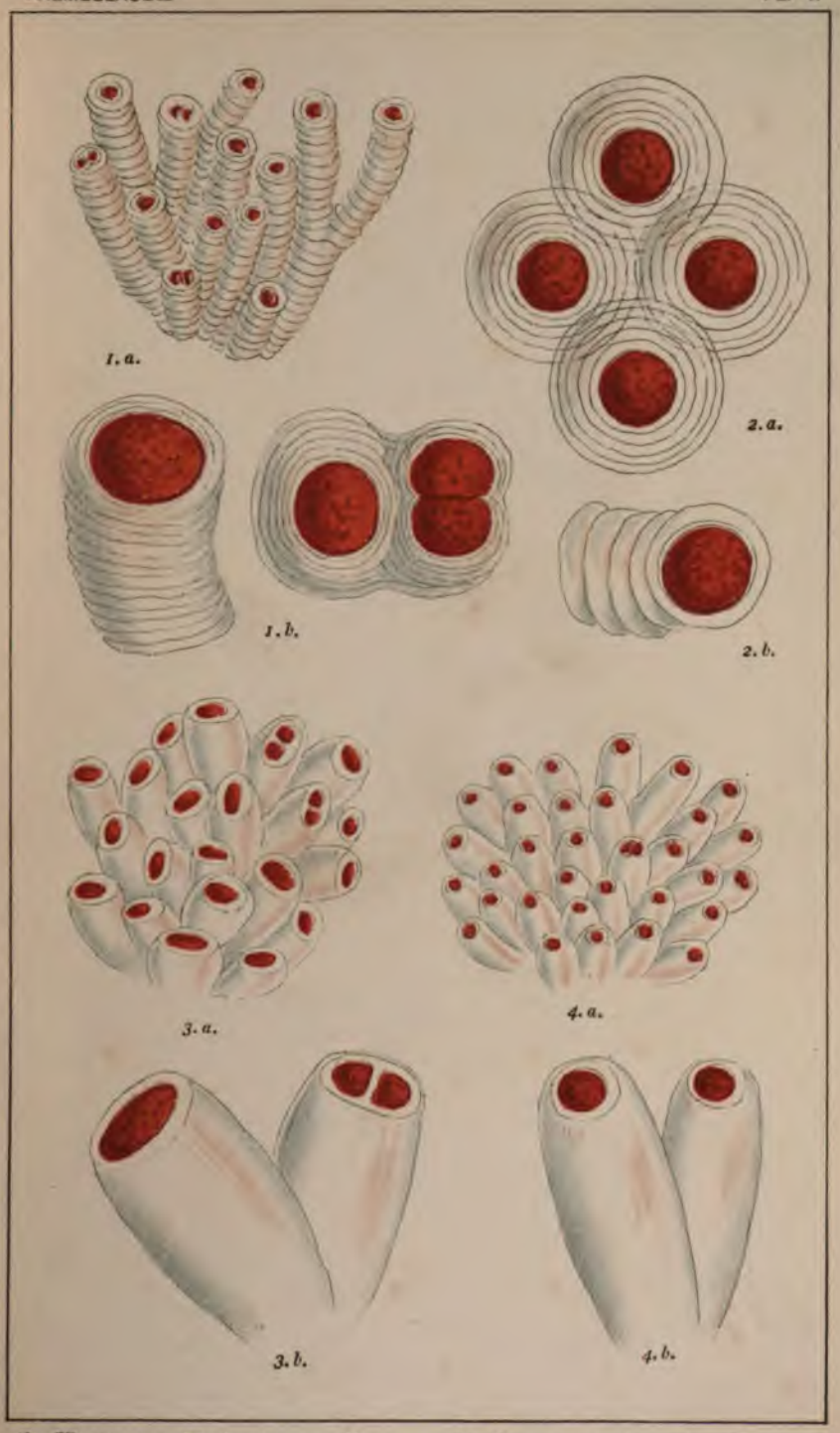


1. *Glœocystis ampla. Kutz.*
2. *Glœocystis vesiculosa. Nag.*
3. *Glœocystis botryoides. Kutz.*
4. *Glœocystis adnata.* Huds.
5. *Glœocystis Paroliniana. Nag.*
6. *Schizochlamys gelatinosa.* Br.







1. *Urococcus Hookerianus, Hass.* 2. *Urococcus insignis Hass.*
3. *Urococcus Allmanni. Hass.* 4. *Urococcus cryptophilus. Hass.*

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[redacted]

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1. × 400.

2. × 400.

3. a. × 400.

3. b. × 800.

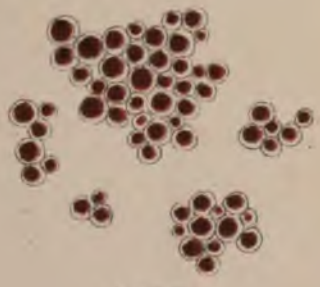
4. a. – n.s.

5. a. × 400.

5. b. × 800.

4. b. × 400.

6. a. – n.s.



6. b. × 400.

1. *Palmella mucosa. Kutz.*
2. *Palmella miniata. v. æqualis.* Nag.
3. *Palmella hyalina. Breb.*
4. *Palmella Moöreana.* Harv.
5. *Palmella prodigiosa. Elor.*
6. *Porphyridium cruentum.* Ag.

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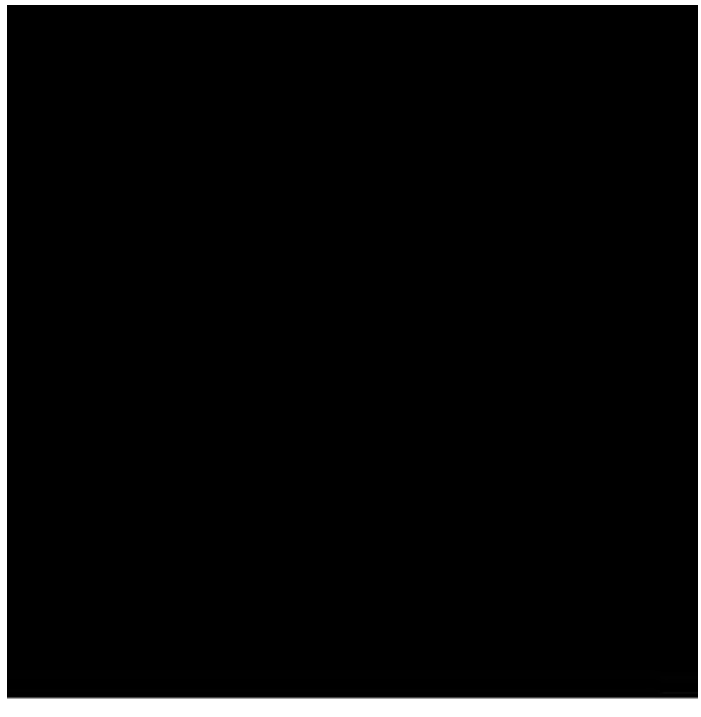
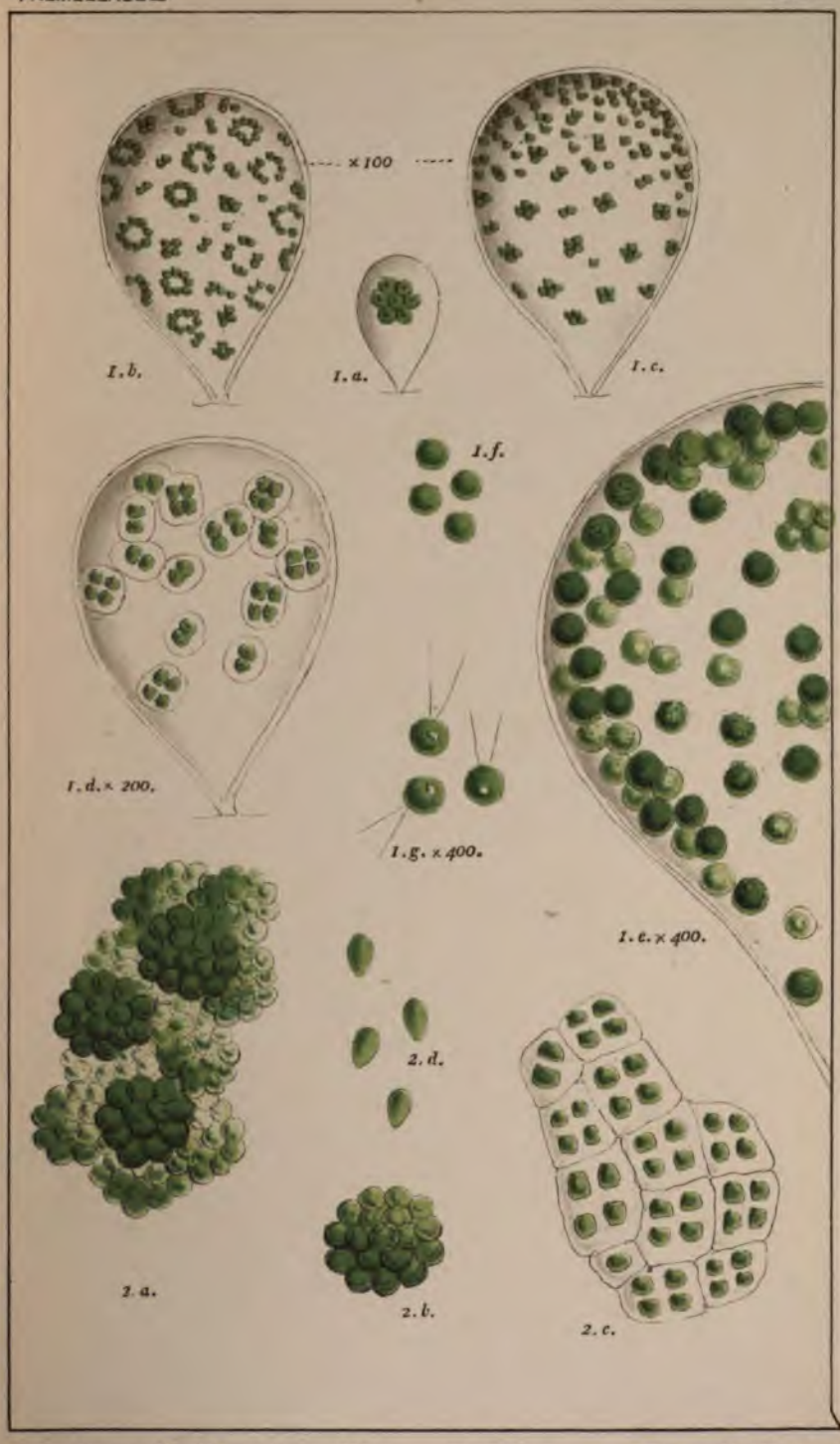
1. *Tetraspora bullosa Ag.* 2. Tetraspora gelatinosa Desv.
3. *Tetraspora lubrica Ag.* 4. Tetraspora flava Hass.





1. *Apiocystis Brauniana. Nag.* 2. *Botryococcus Braunii. Kutz.*

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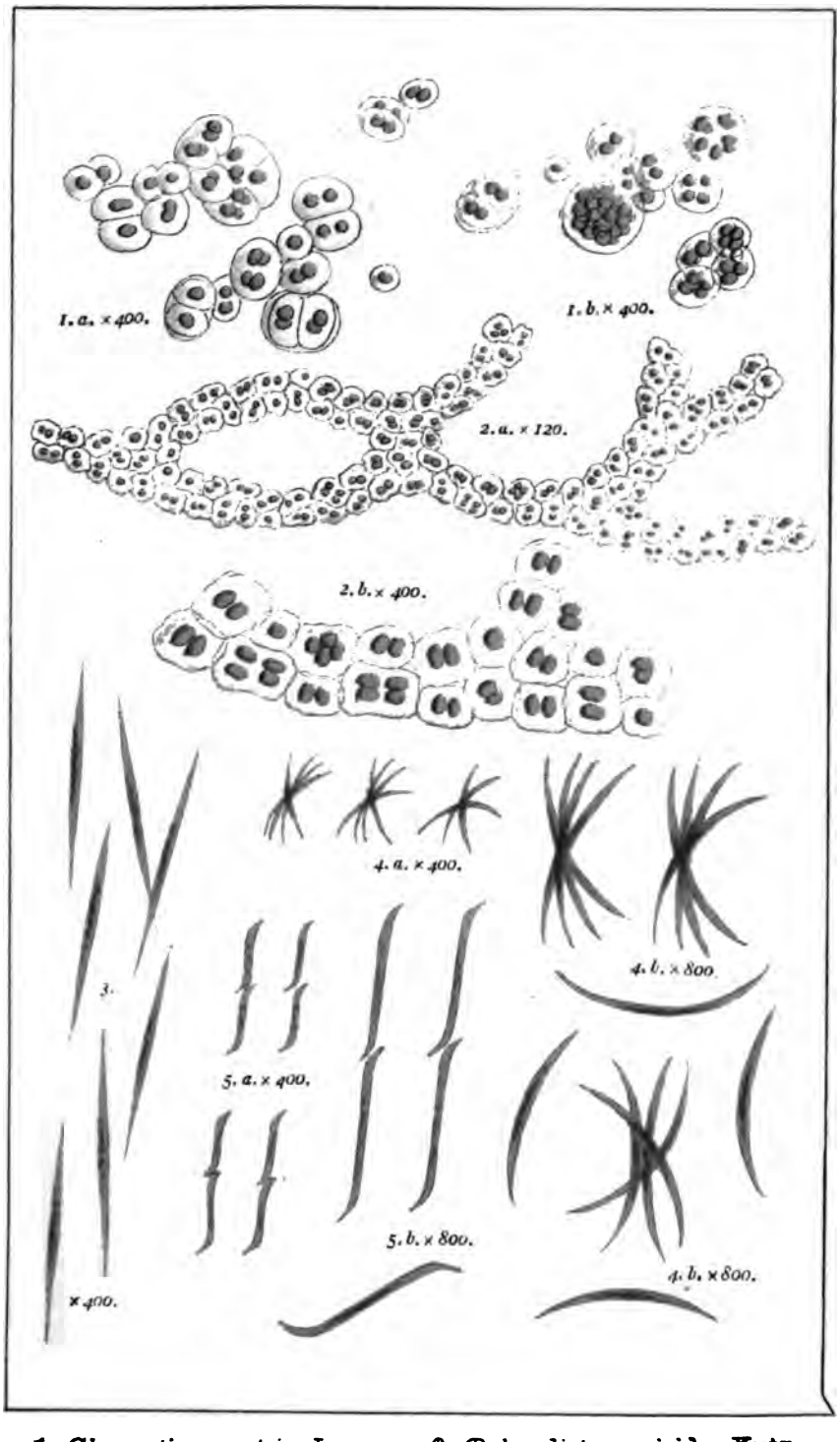

1. *Glœocystis rupestris. Lyng.* 2. *Palmodictyon viride. Kutz.*
3. *Rhaphidium acicular Br.* 4. *Rhaphidium falcatum. Rabh.*

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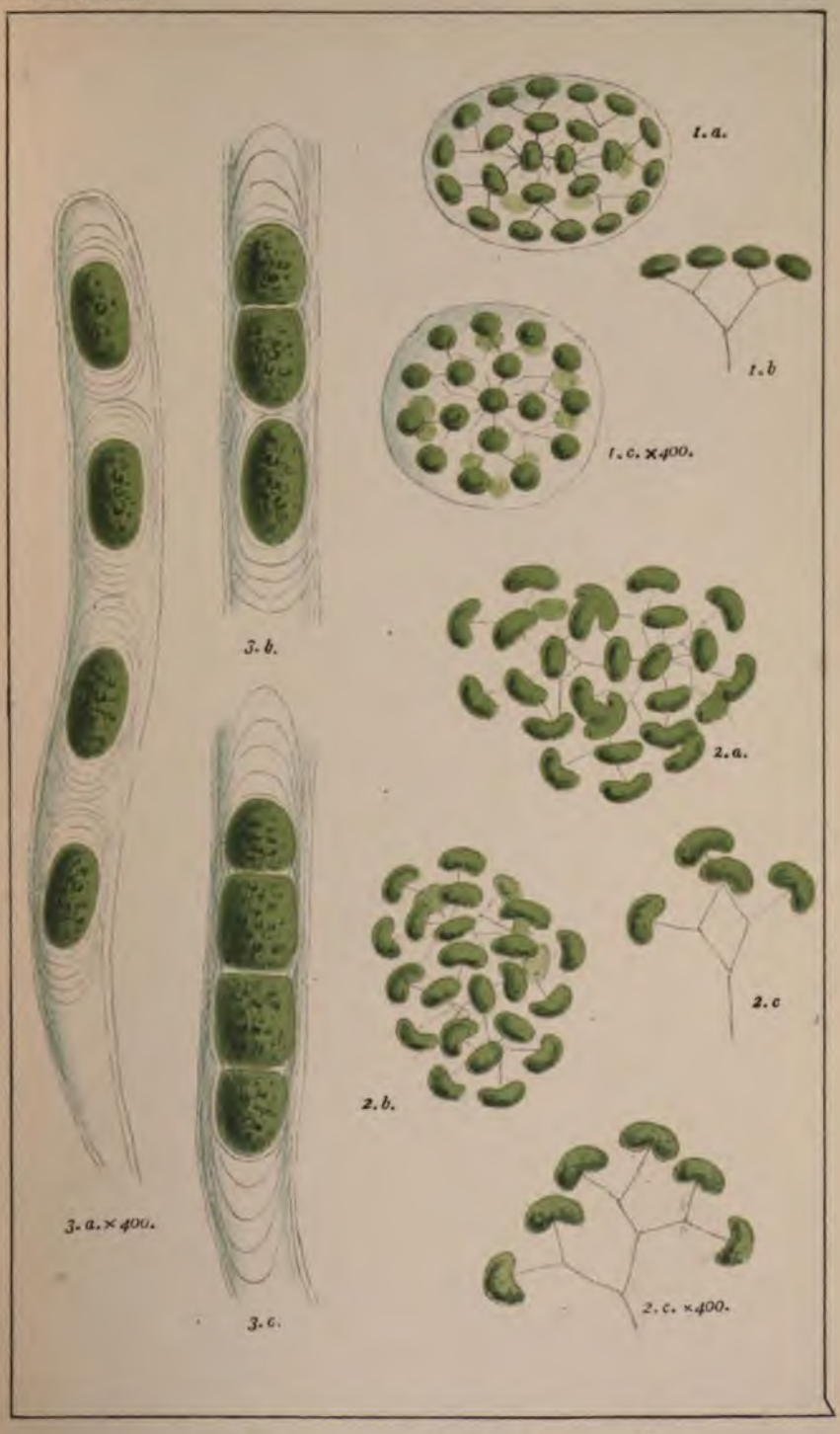

1. *Dictyosphærium Ehrenbergianum.* Nag.
2. *Dictyosphærium reniforme.* Buln.

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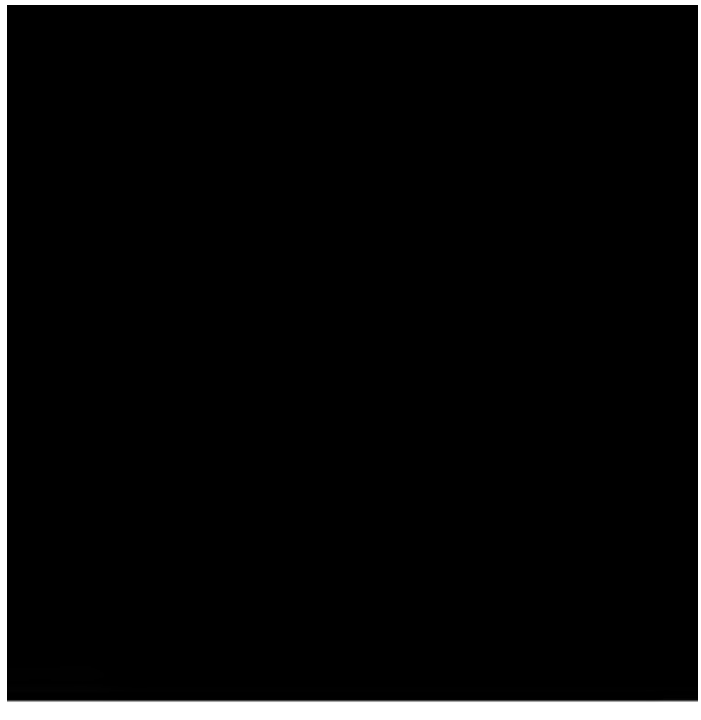
1. *Hormospora mutabilis. Breb.*
2. Hormospora ramosa. Thw.
3. *Hormospora transversalis. Breb.*
4. Hydrurus penicillatus. Ag.



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1. *Nephrocytium Agardhianum. Nag.* 2. *Nephrocytium Naegelii. Gr.*
3. *Botrydina vulgaris. Breb.* 4. *Mischococcus confervicola. Nag.*

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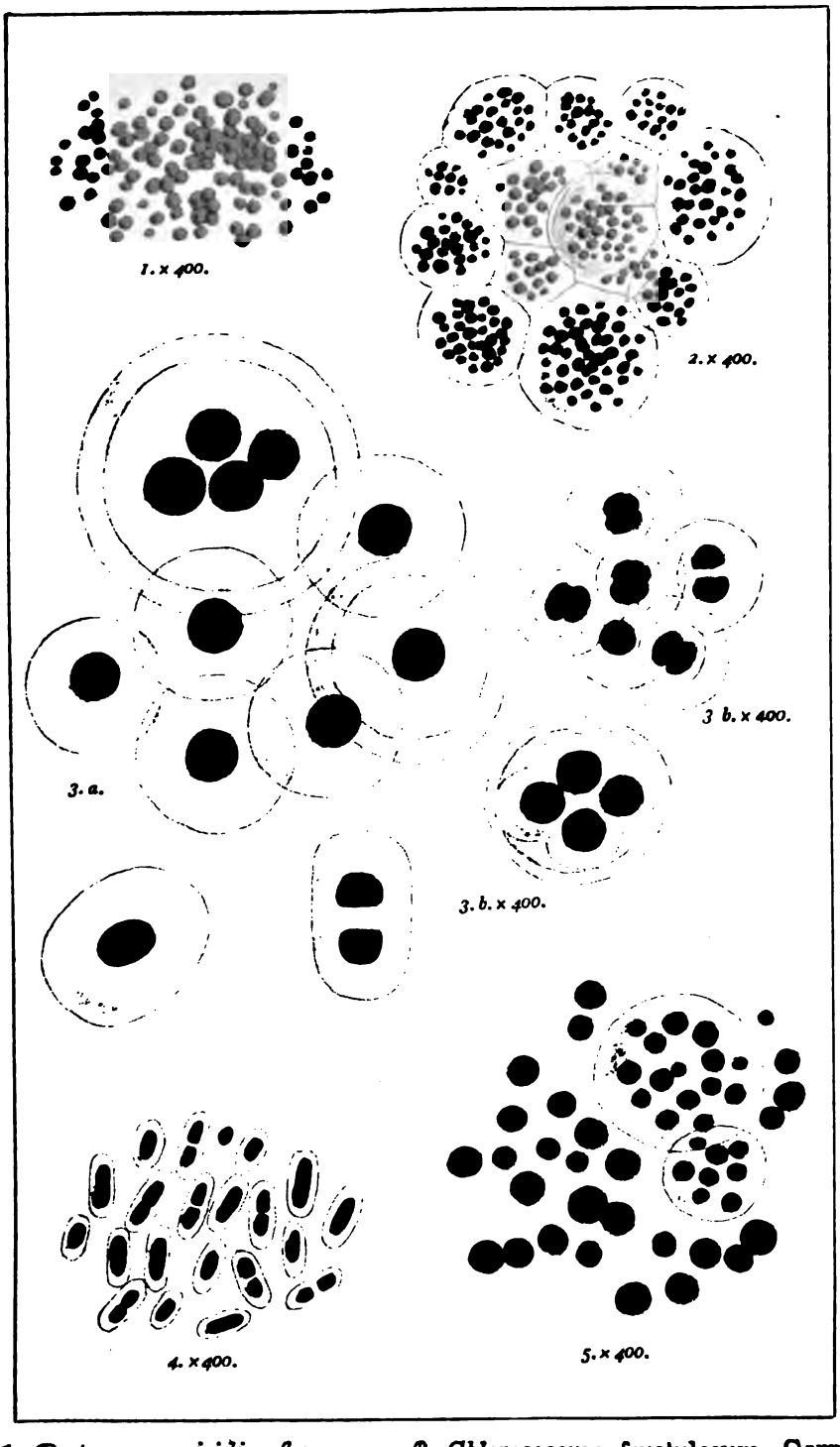
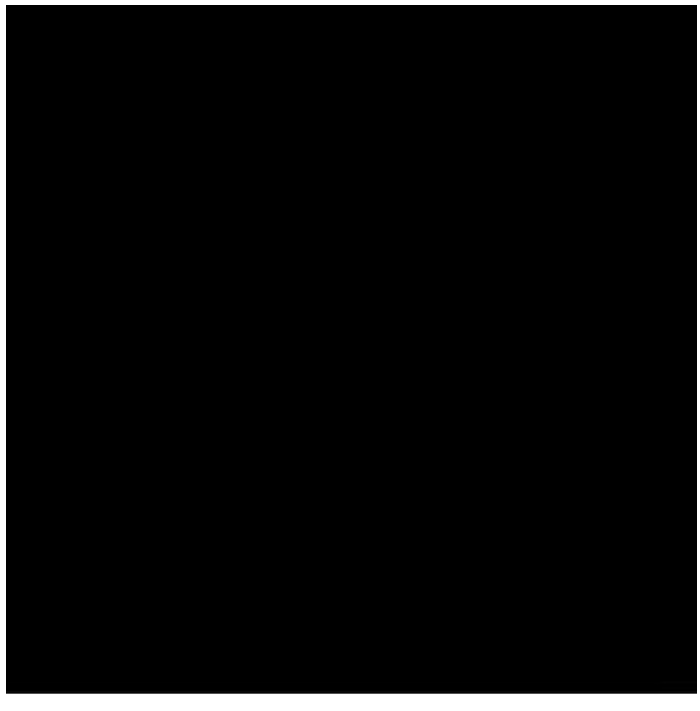


1. *Protococcus viridis. Ag.* 2. *Chlorococcum frustulosum. Carm.*
3. *Chlorococcum gigas. Grun.* 4. *Chlorococcum murorum. Grev.*
5. *Chlorococcum humicola. Näg.*



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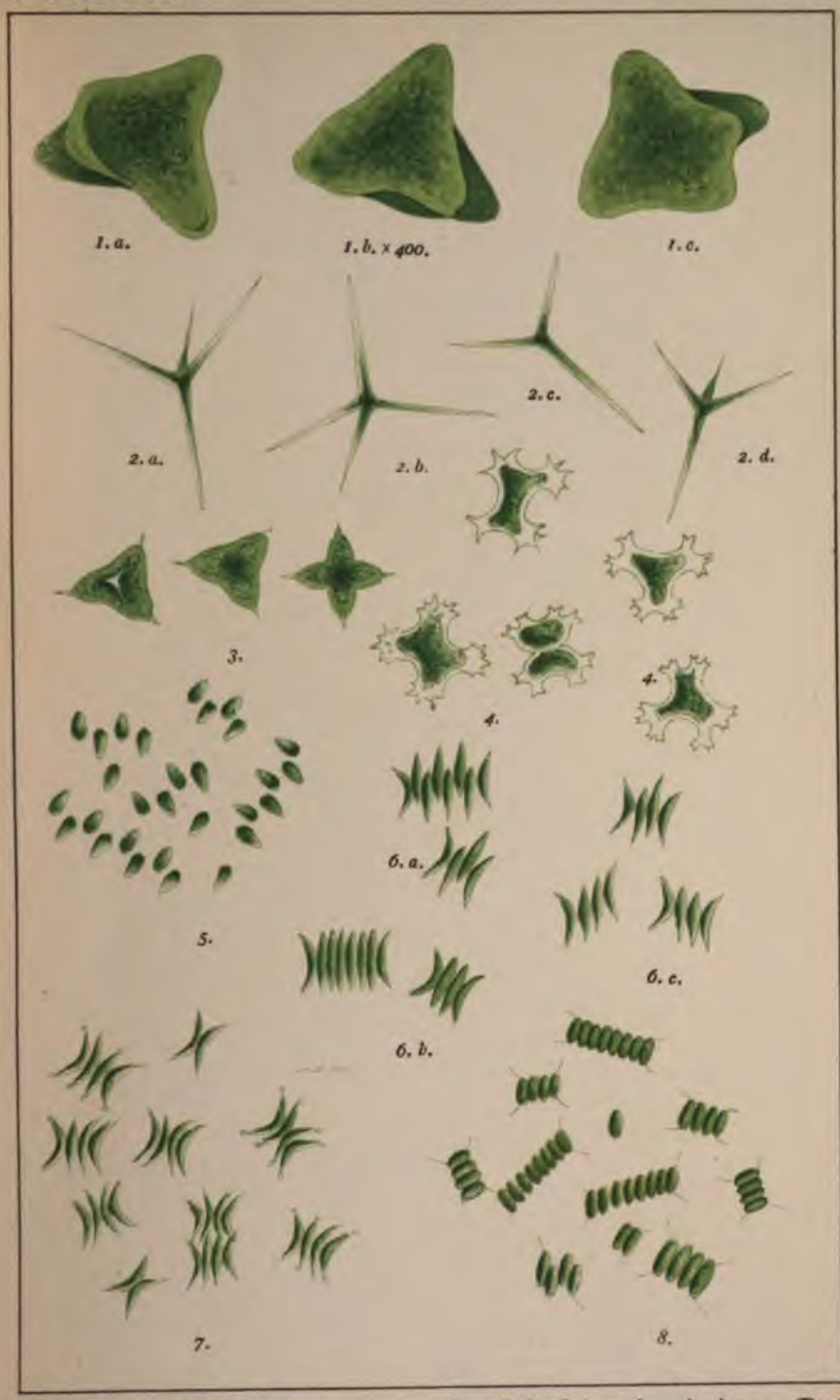

1. *Polyedrium gigas. Wittr.*
2. *Polyedrium longispinum. Perty.*
3. *Polyedrium tetrahedricum. Nag.*
4. Polyedrium enorme. DBary.
5. *Scenedesmus obtusus. Mey.*
6. Scenedesmus acutus. Mey.

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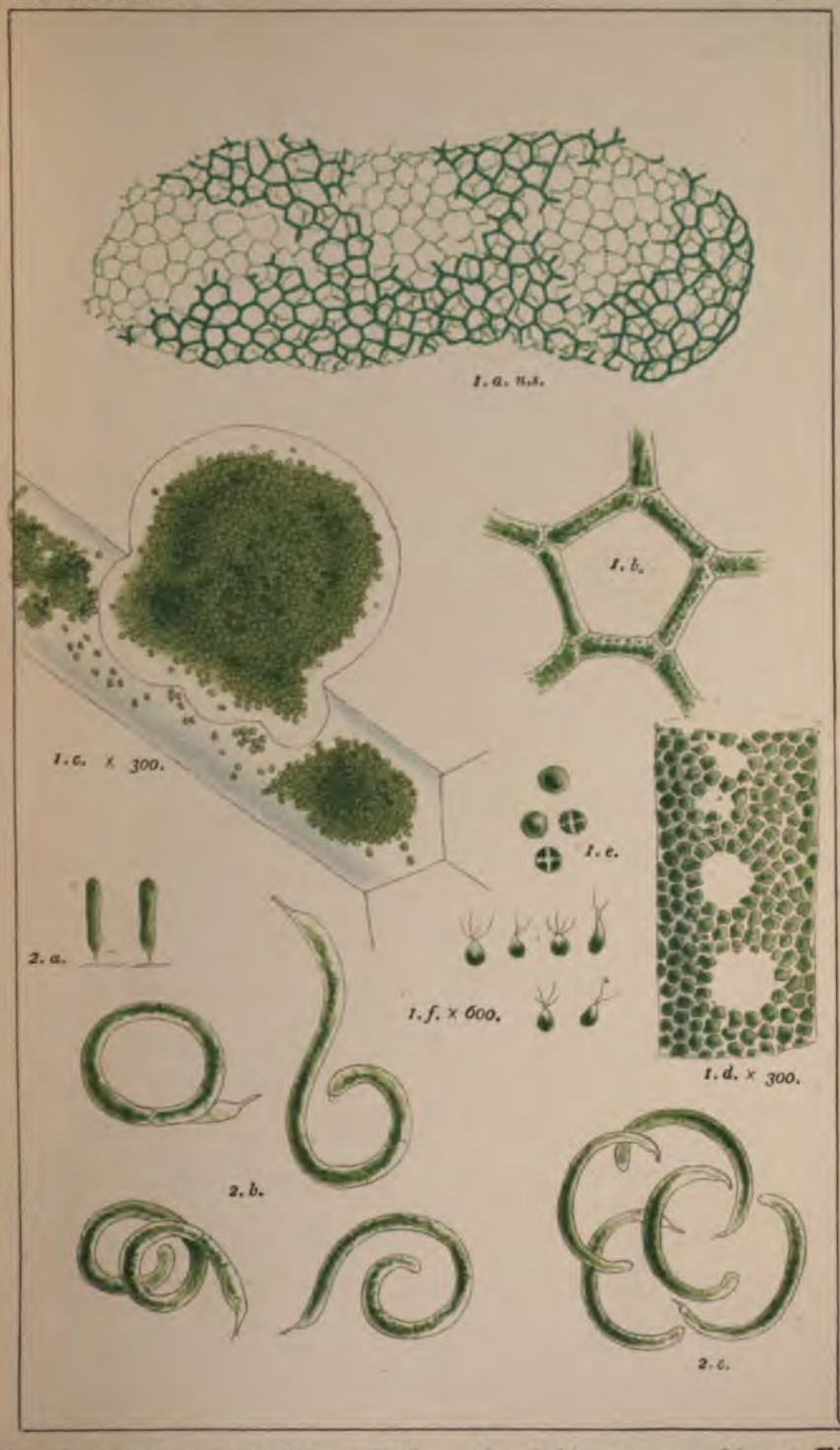
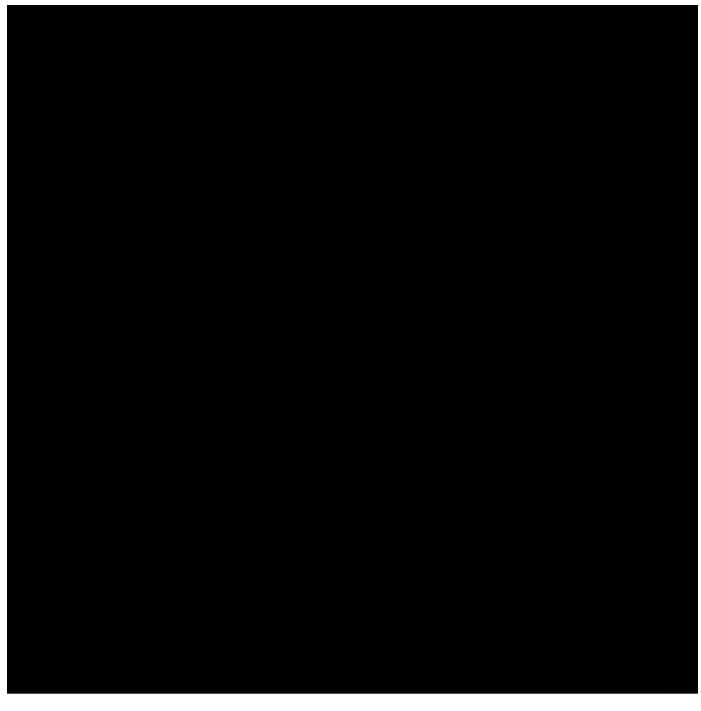
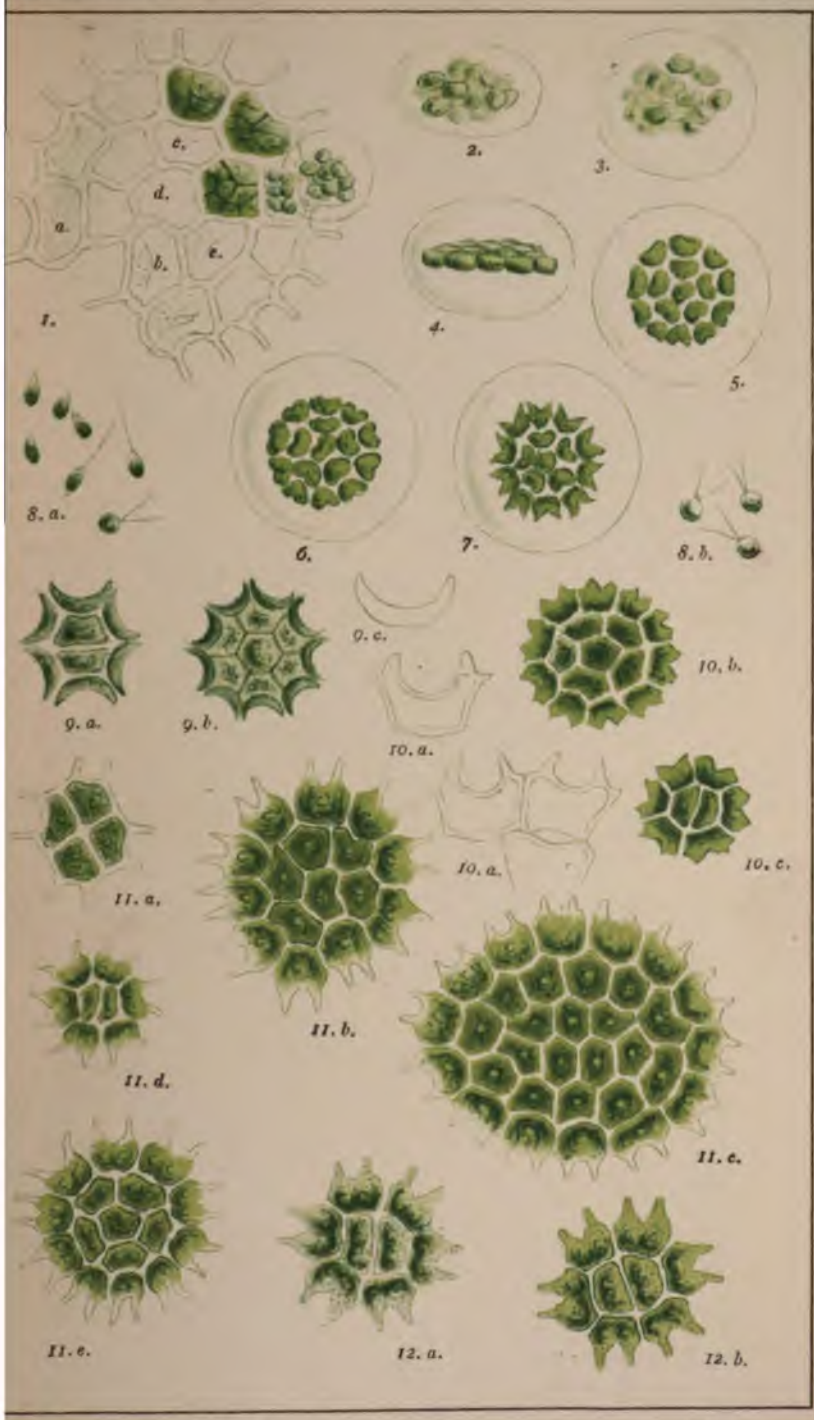


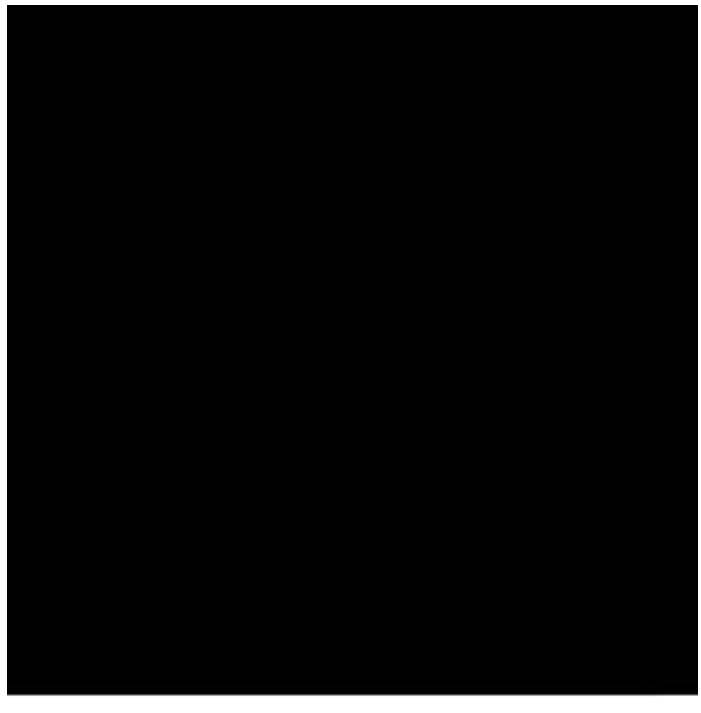
1. *Hydrodictyon utriculatum. Roth.* 2. Ophiocytium cochleare. Eich.

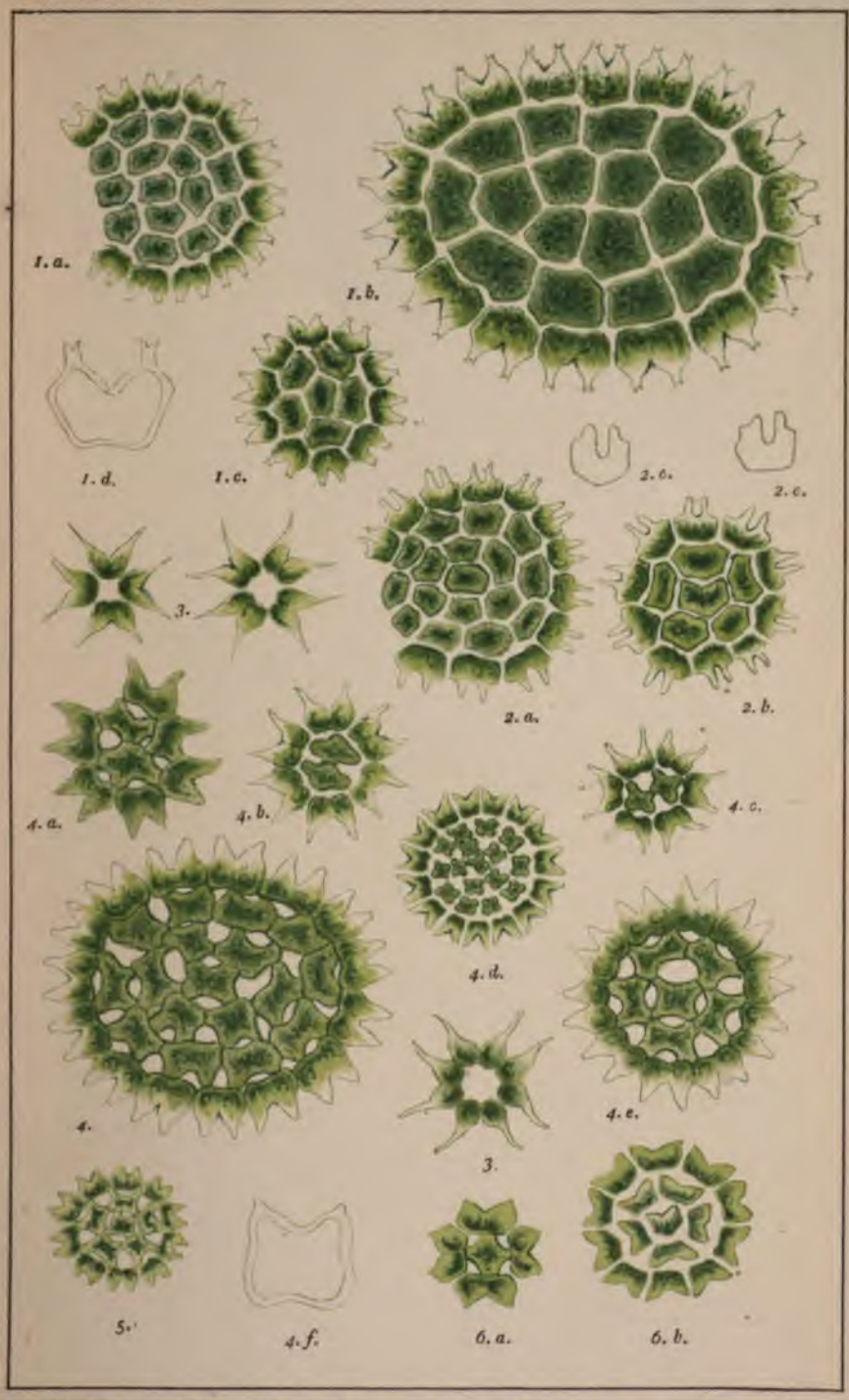


Sciadium arbuscula. Br.

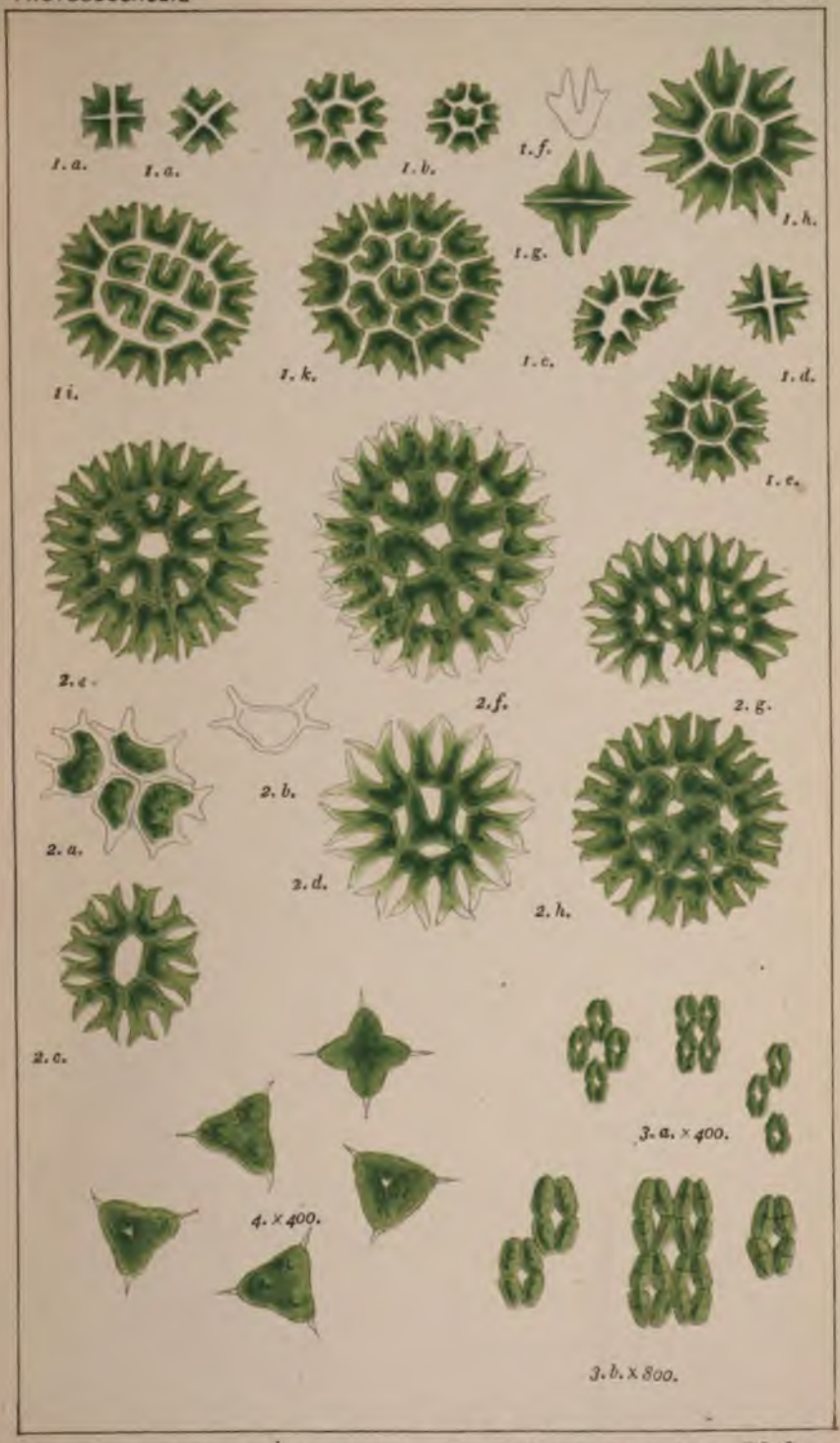


1-7. Stages of development in Pediastrum Boryanum. Turp.
Pediastrum Selenaea. Kutz.
Pediastrum Boryanum. Turp.
10. Pediastrum angulosum. Ehrb.
12. var. granulosum. Br.

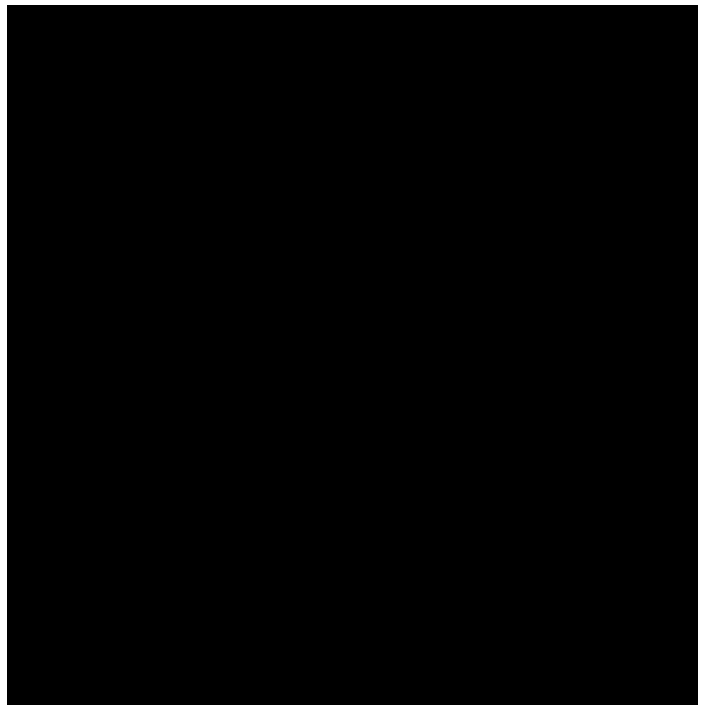


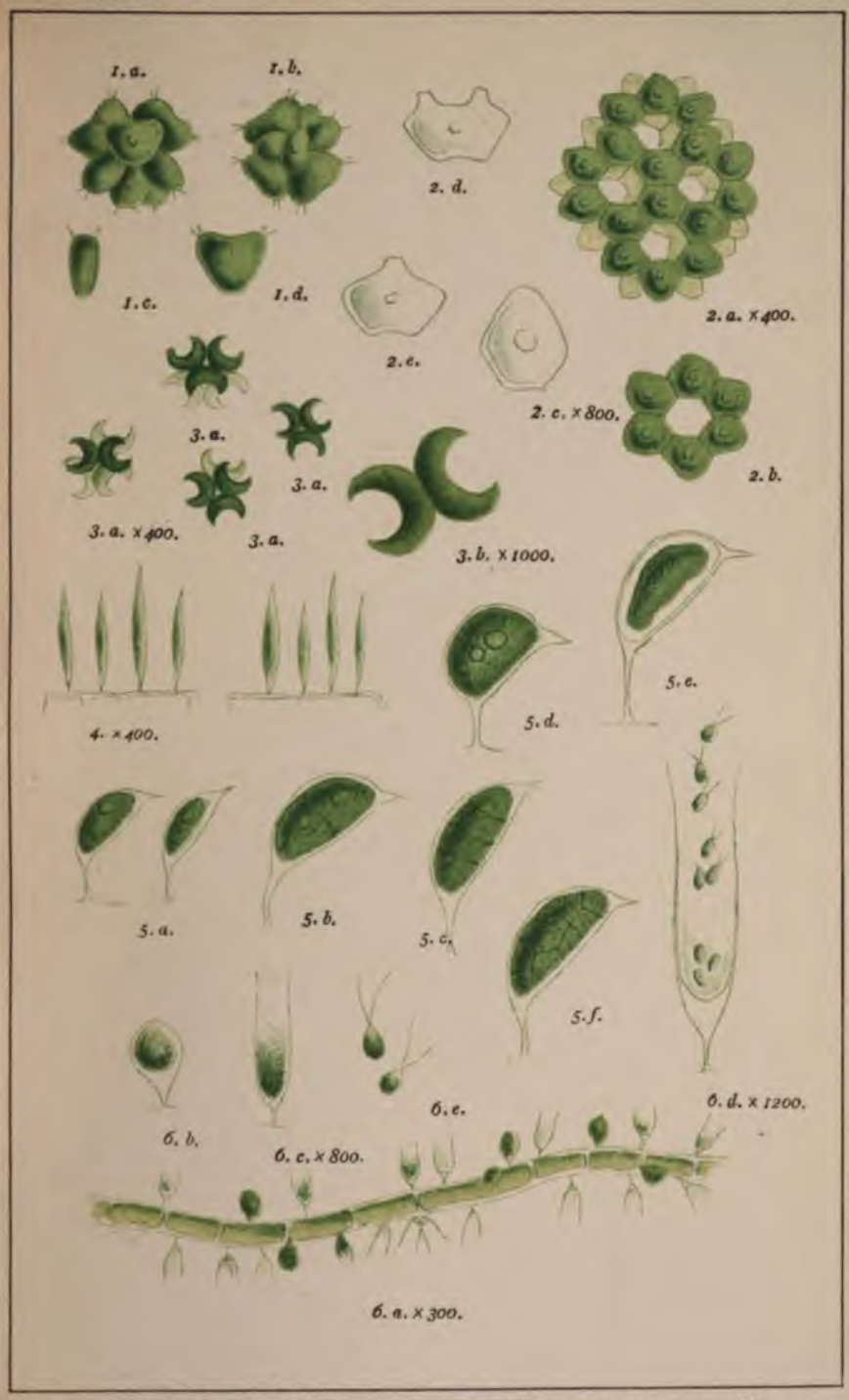


1. *Pediastrum bidentulum. Br.*
2. *Pediastrum constrictum.* Hass.
3. *Pediastrum gracile. Br.*
4. *Pediastrum pertusum* Kutz.
5. *P. pertusum v. clathratum Br.*
6. *P. pertusum v. brachylobum.* B

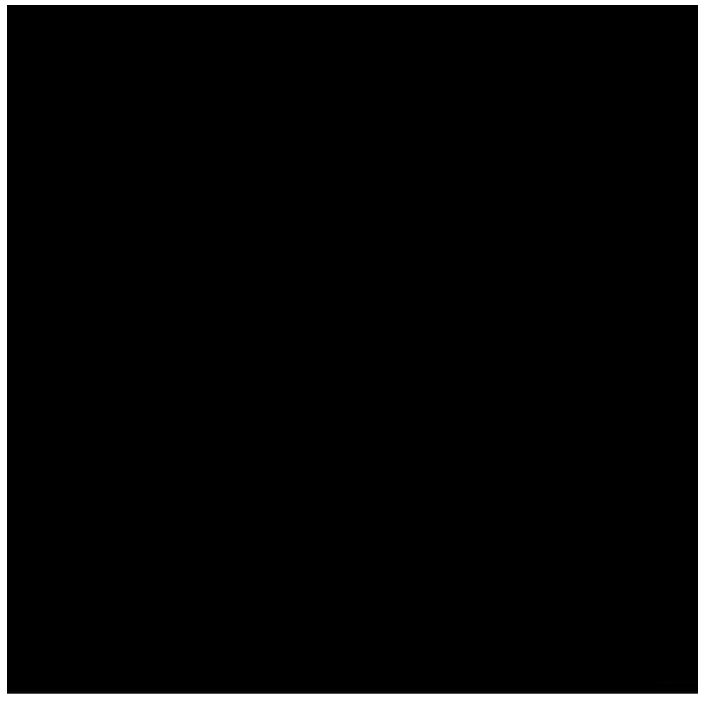


1. *Pediastrum Ehrenbergii. Corda.* 2. *Pediastrum rotula. Ehrb.*
3. *Staurogenia rectangularis. Nag.* 4. *Polyedrium tetraedricum.* Nag

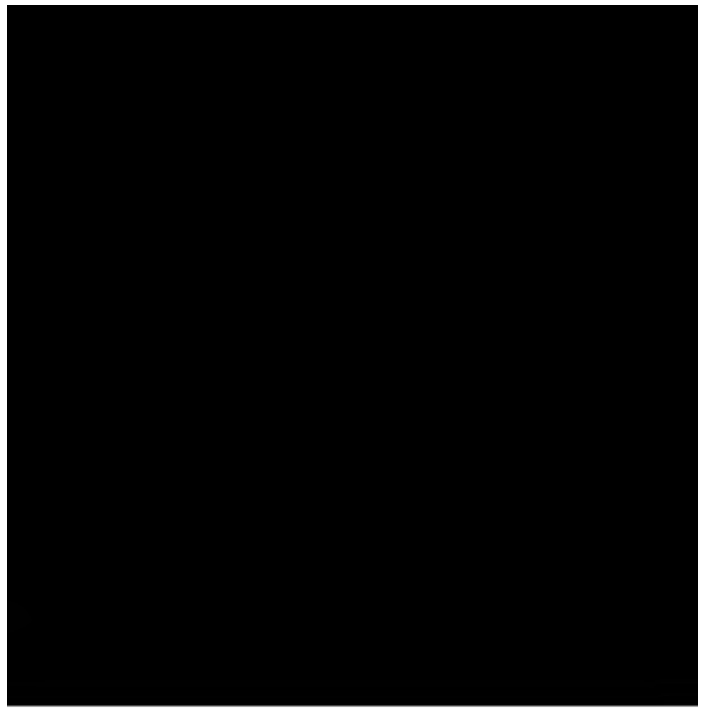


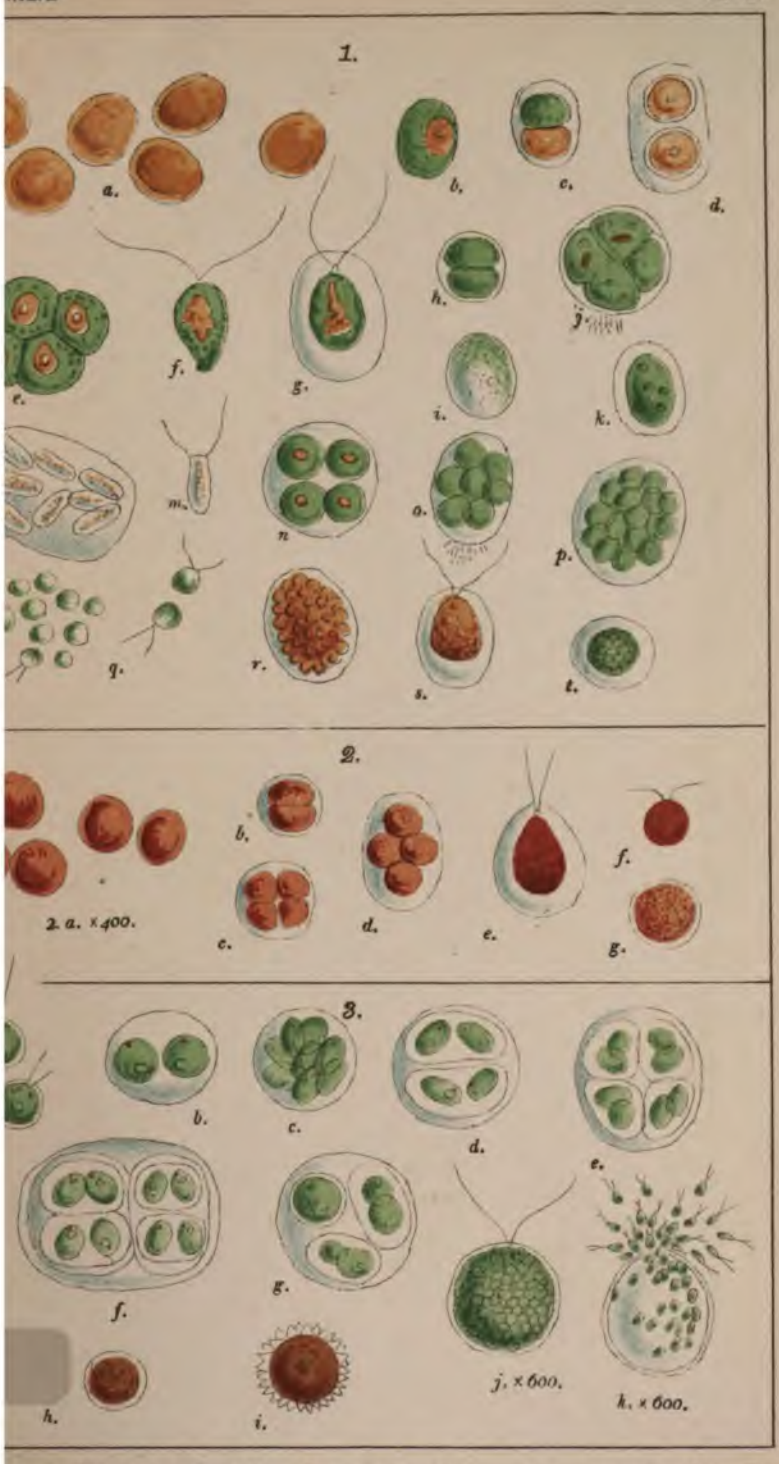


1. *Sorastrum spinulosum. Nag.* 2. *Cœlastrum sphæricum. Nag.*
3. *Selenastrum Bibraianum. Reinsch.* 4. *Characium tenue. Herm.*
5. *Characium ornithocephalum. Br.* 6. *Hydrianum heteromorphum. Reinsc*

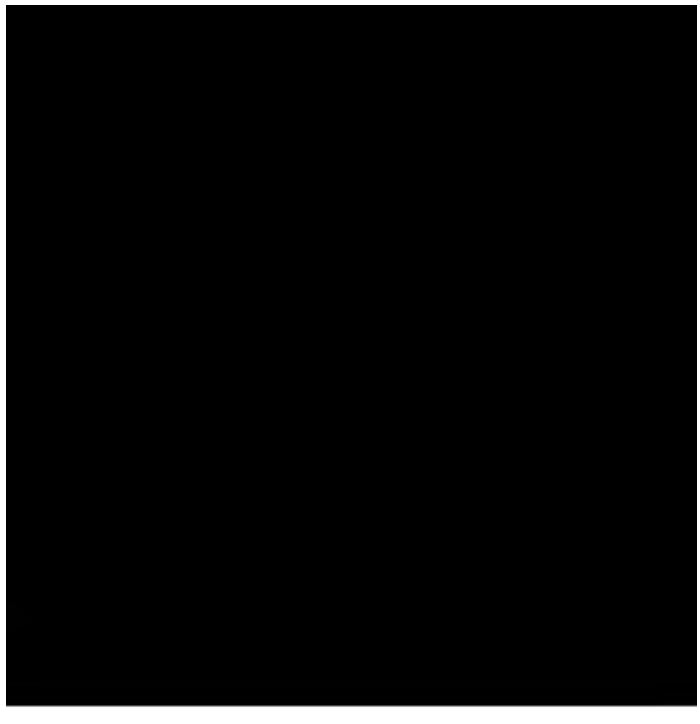


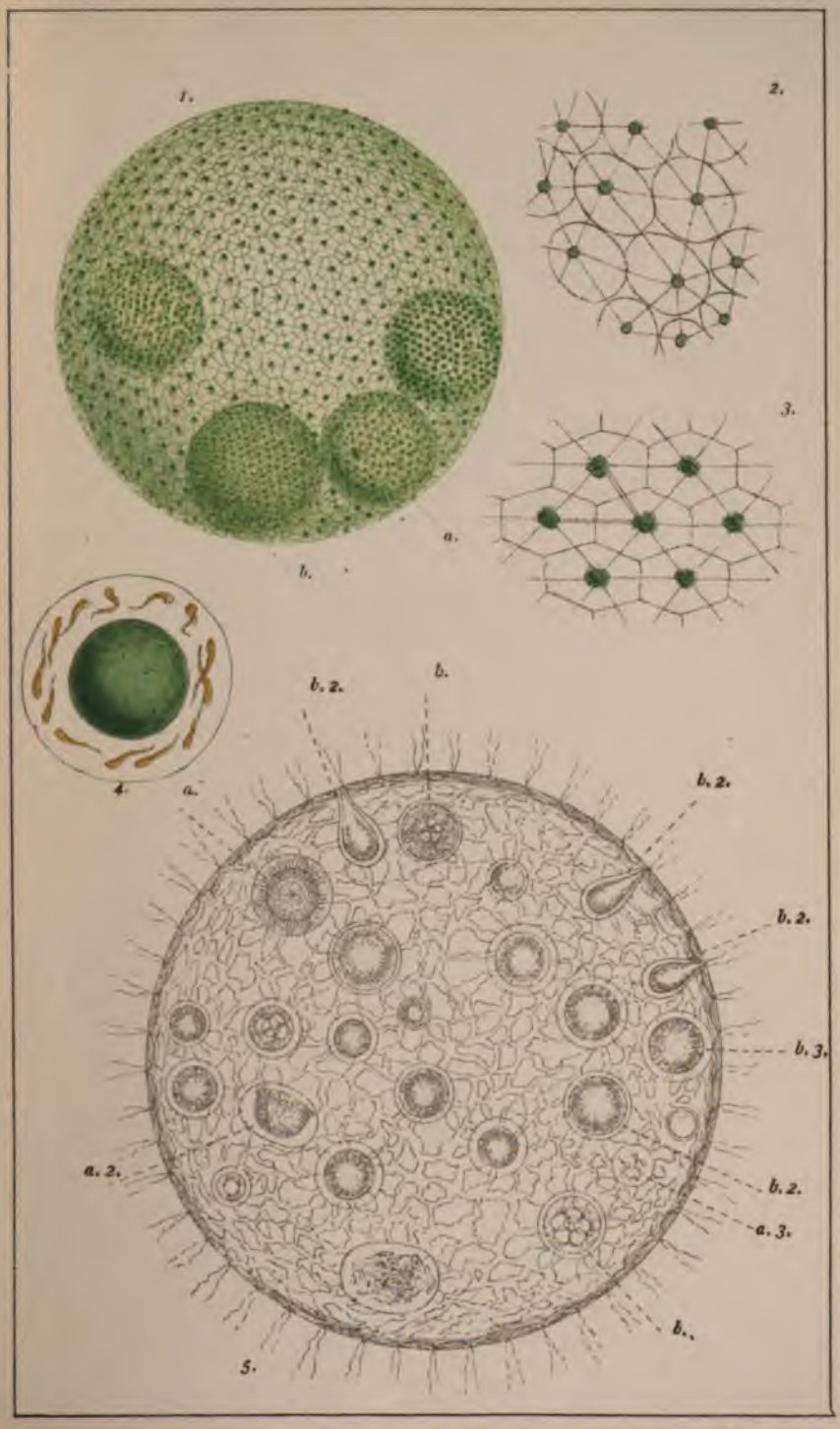
1-8. *Codiolum gregarium.* Br. 9-11. *Characium Sieboldi.* Br.



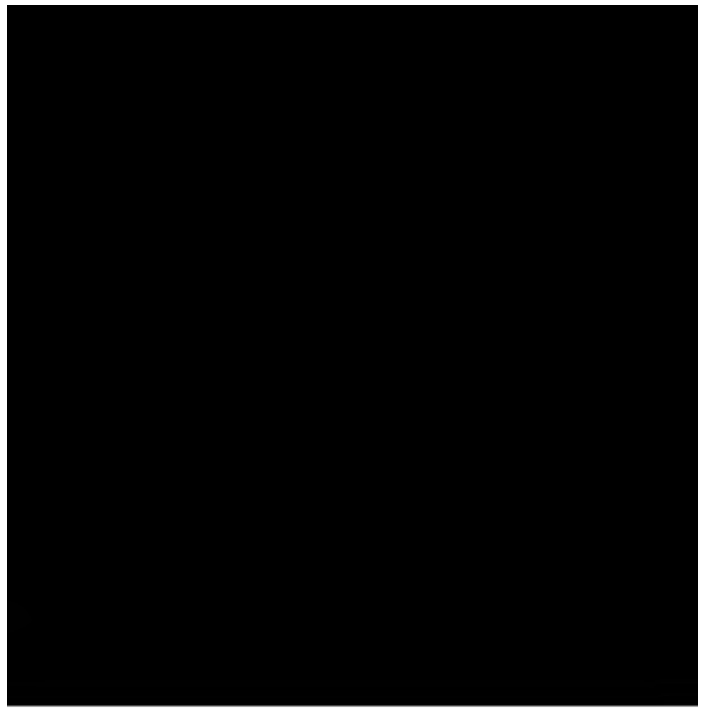


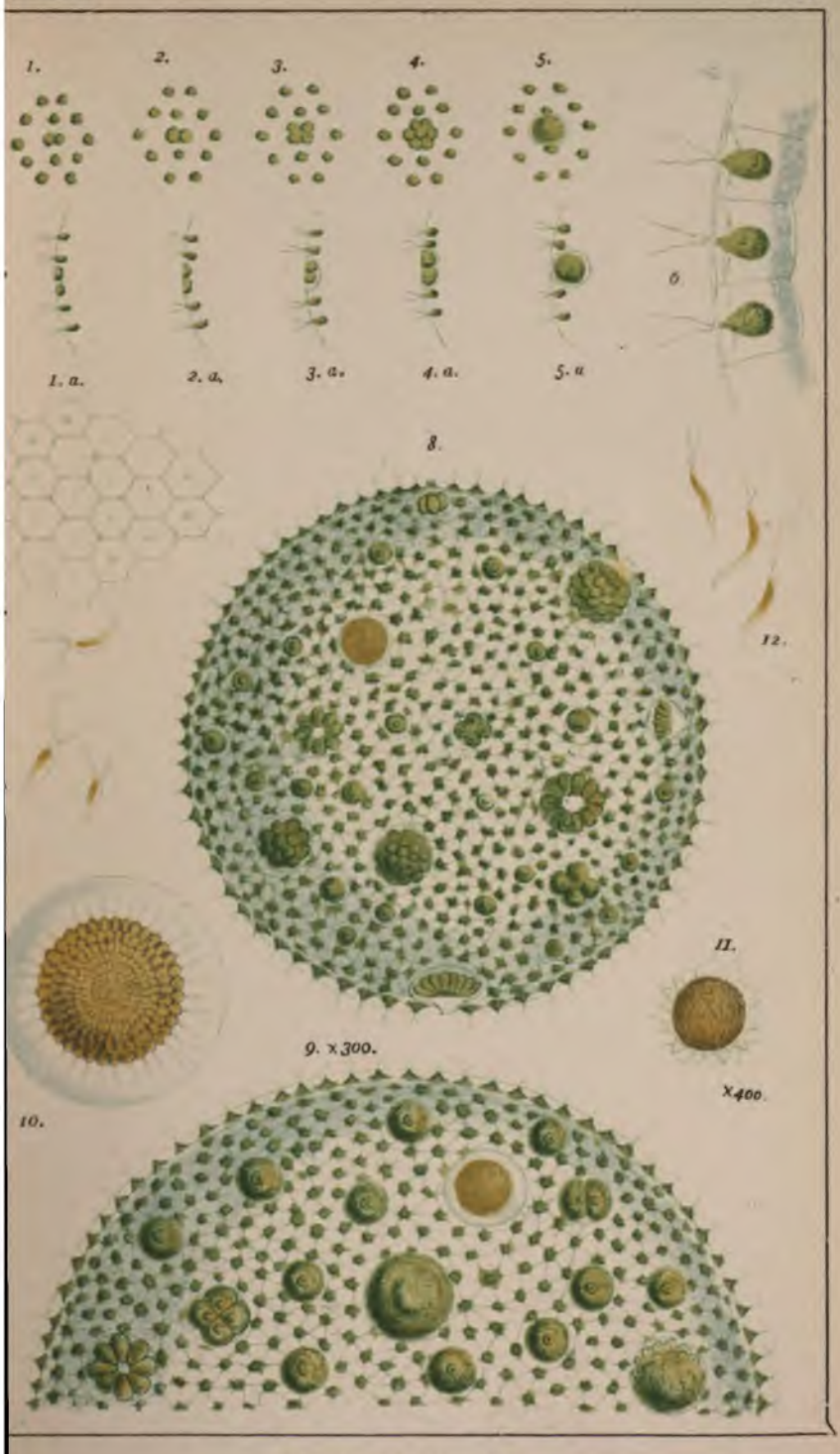
lamydococcus pluvialis. Br. 2. Chlamydococcus nivalis. Br.
3. *Chlamydomonas pulvisculus.* Ehrb.



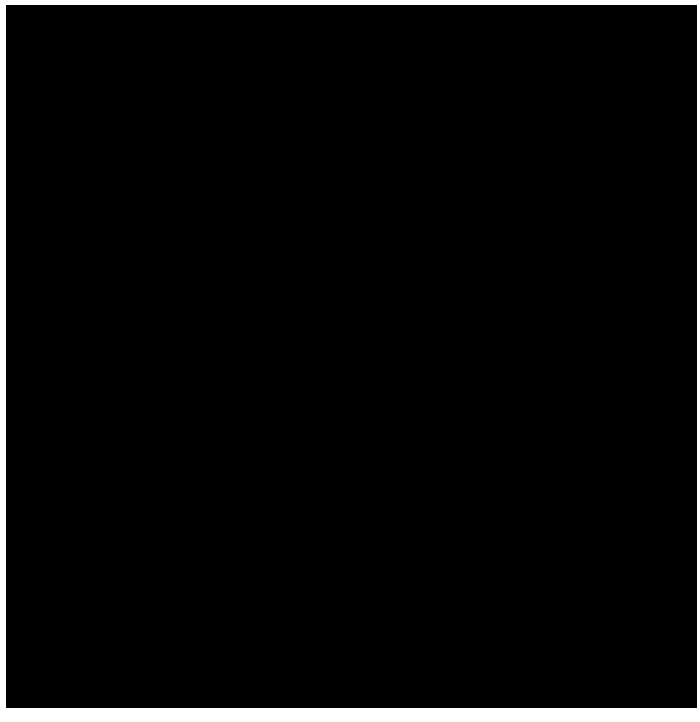


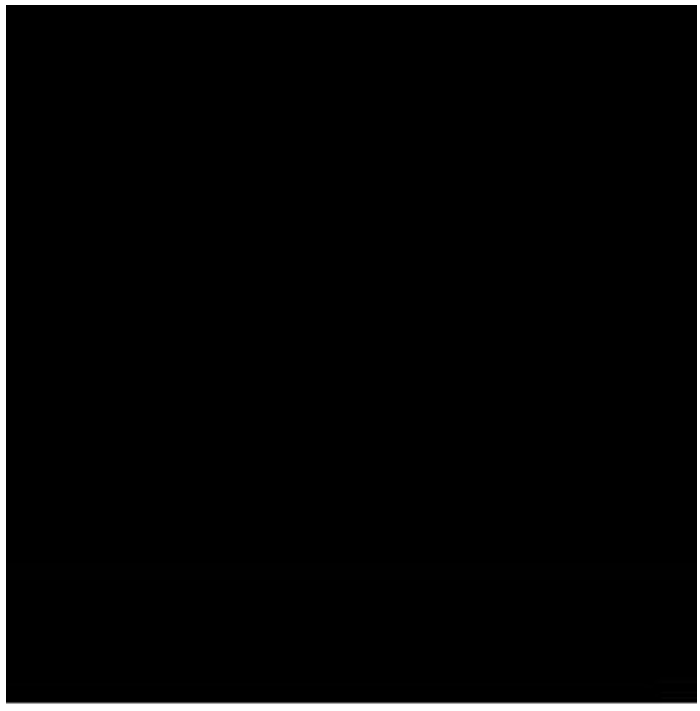
Volvox globator. Ehrb.

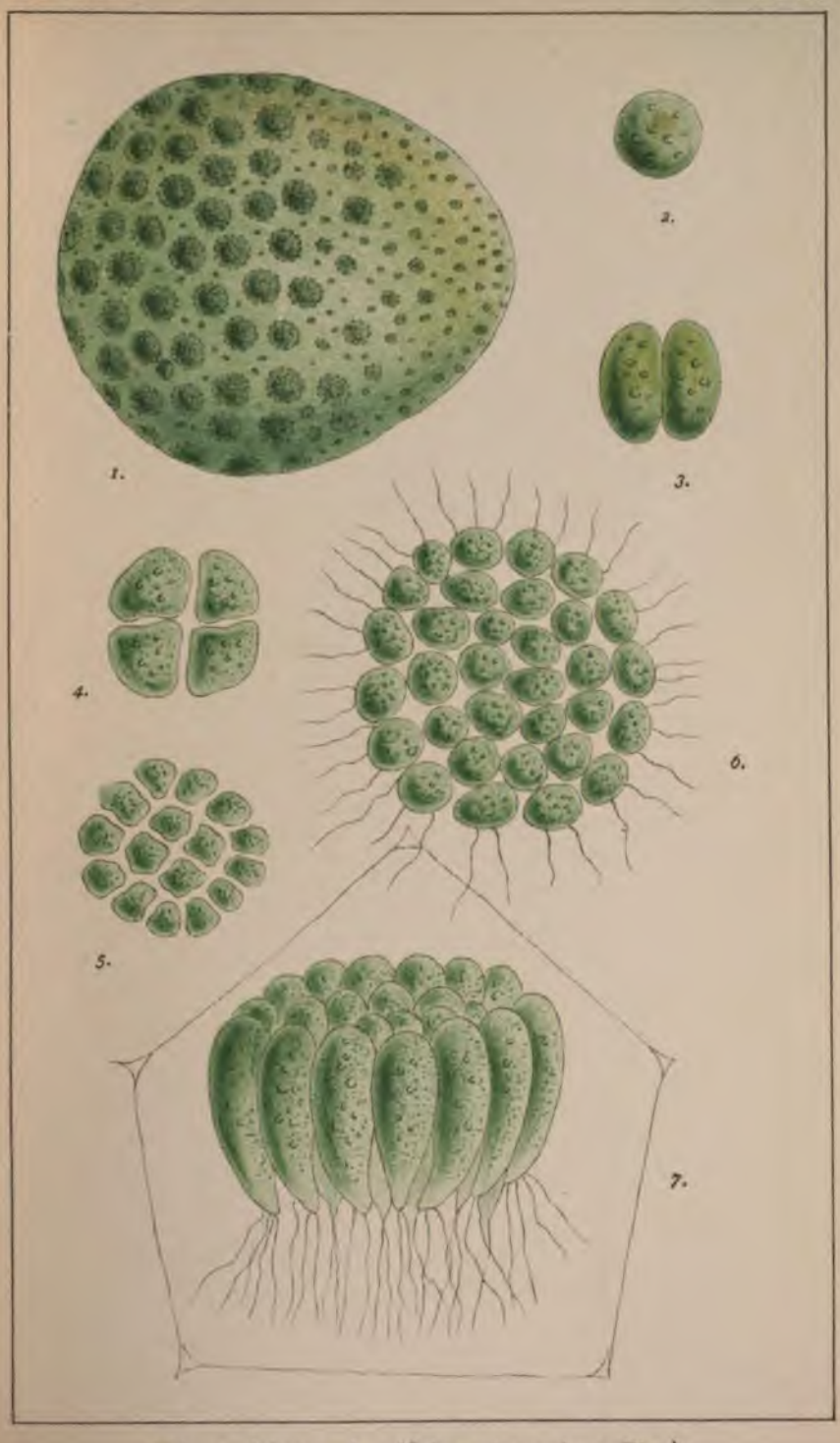




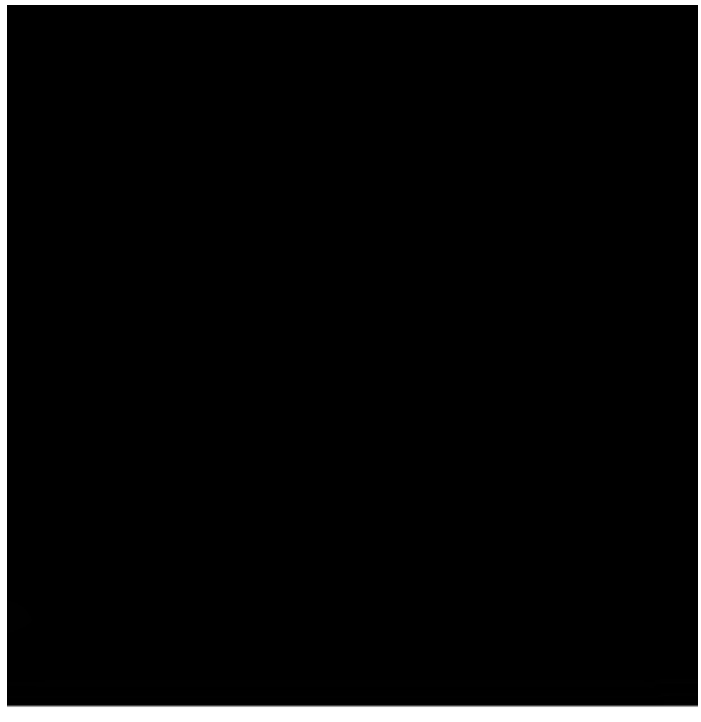
Volvox globator. Ehr.

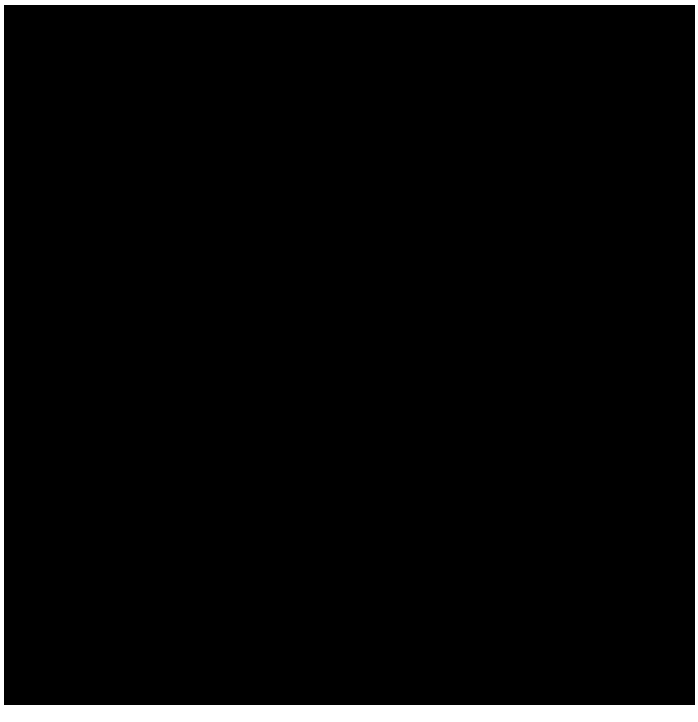


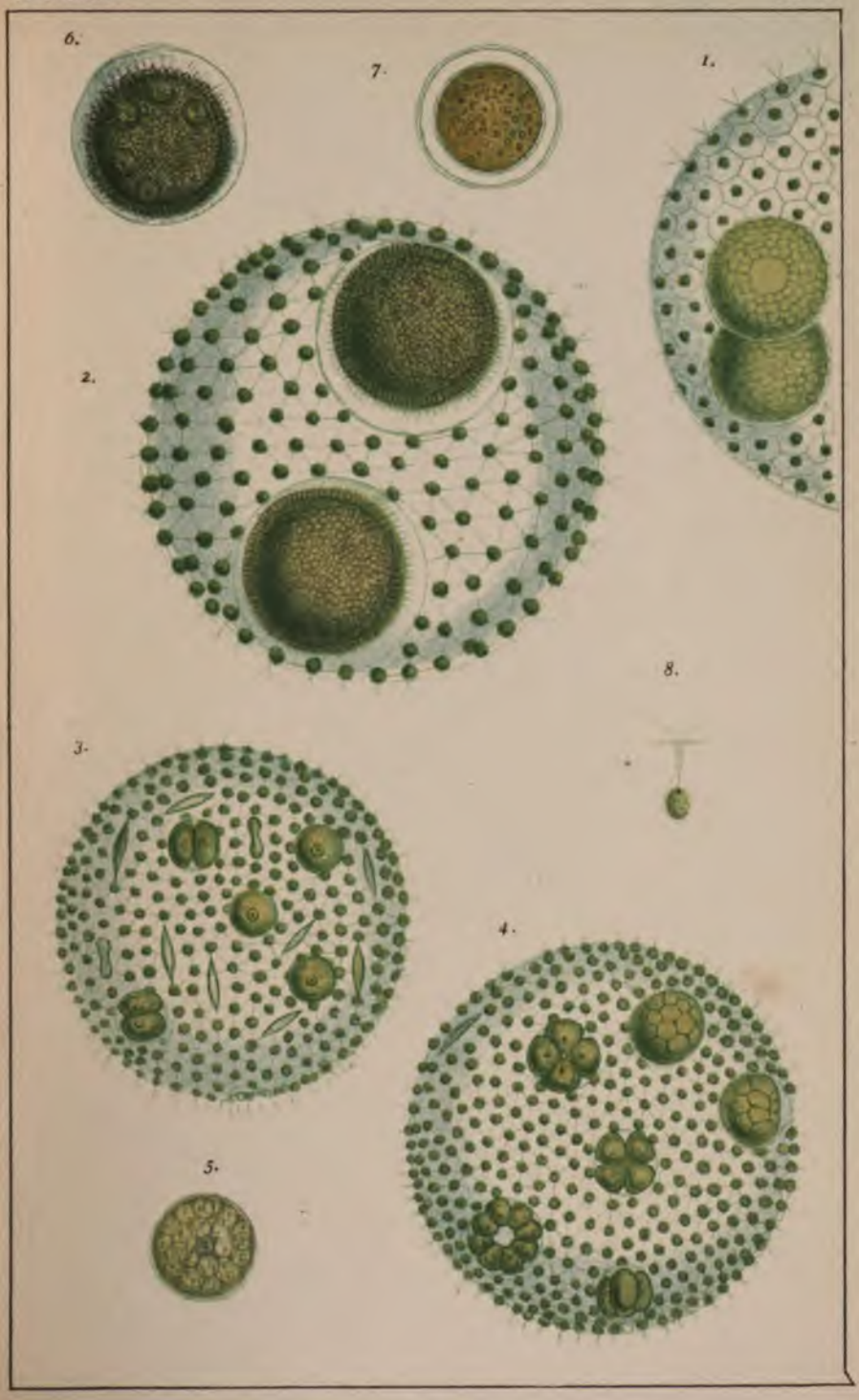




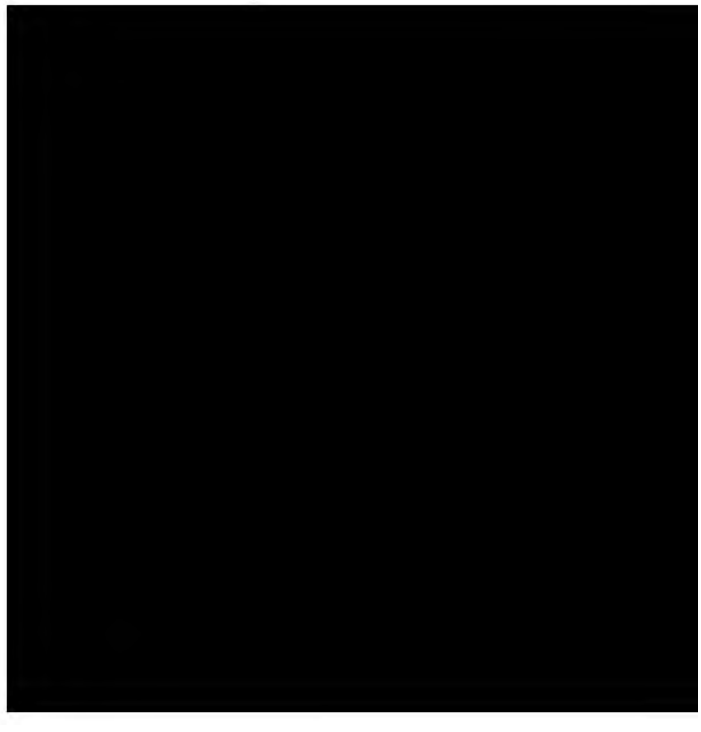
Volvox globator. ♂ (*Sphærosira volvox* Ehr.)

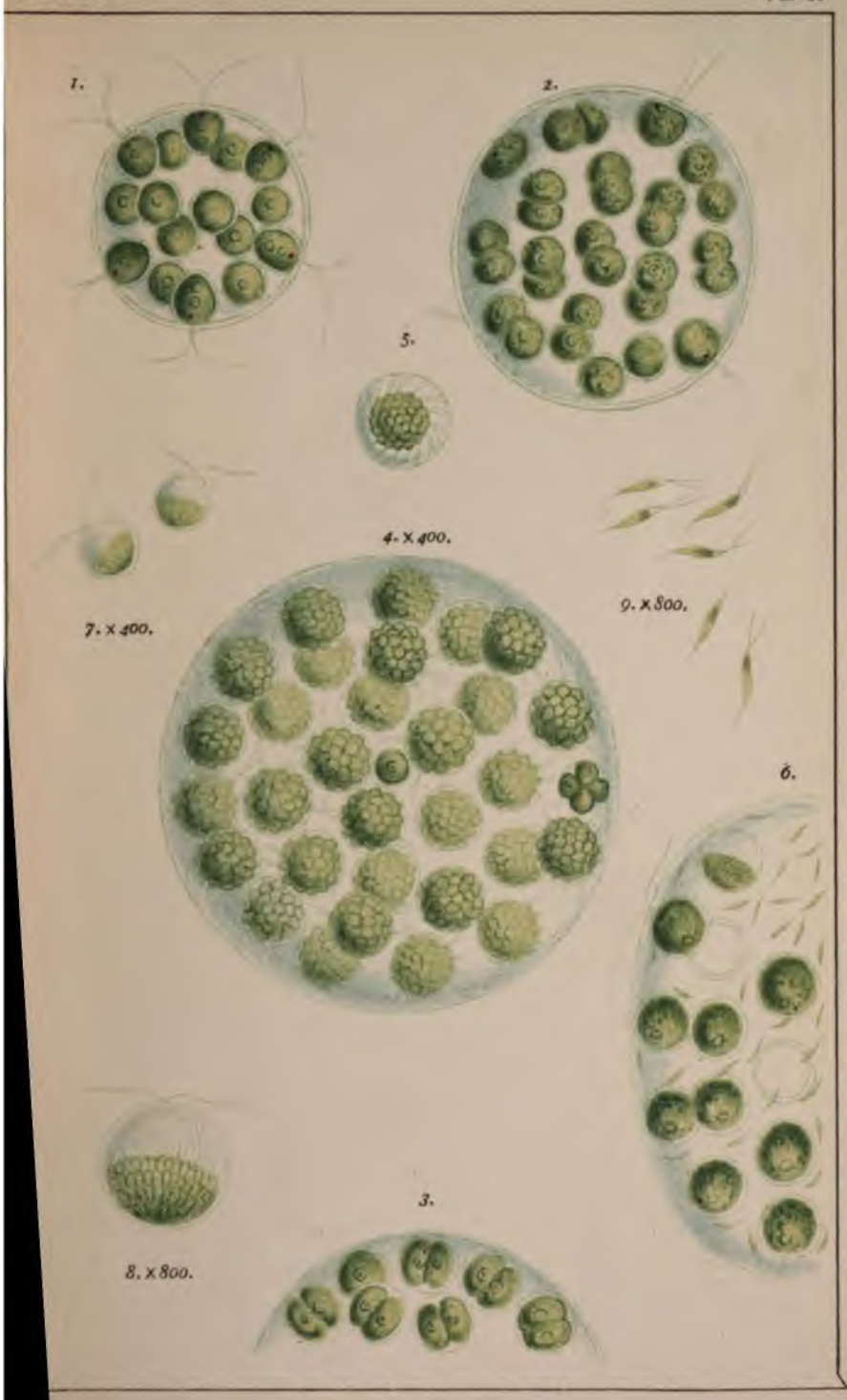




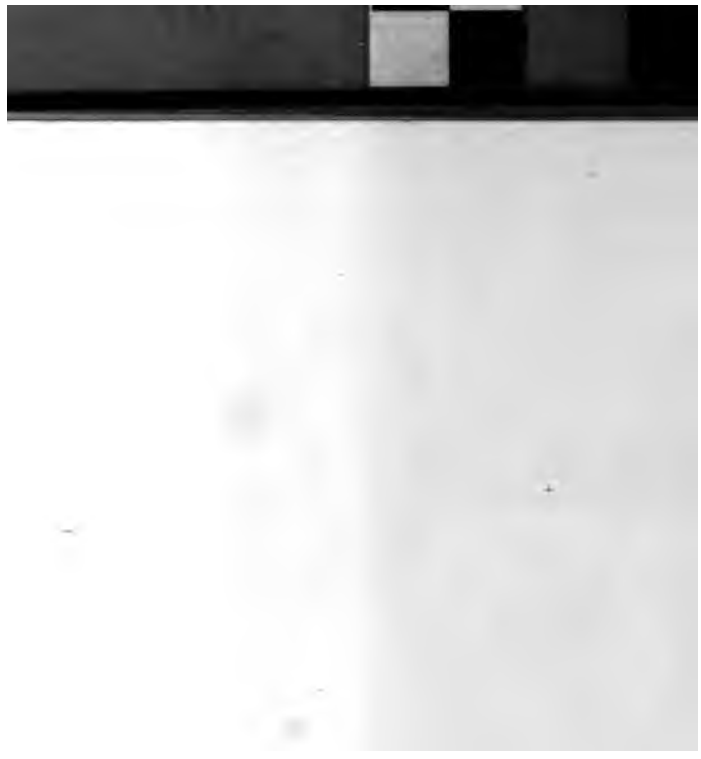


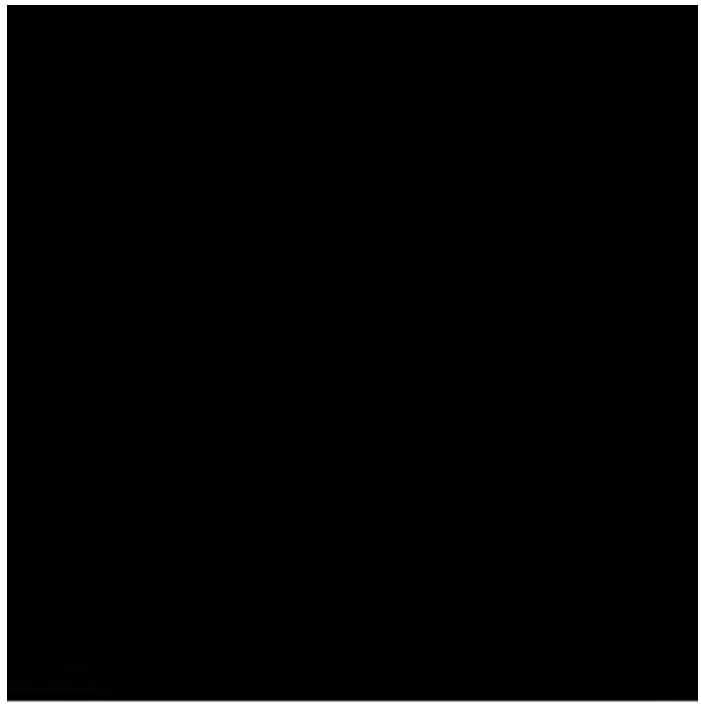
Volvox minor. Stein.

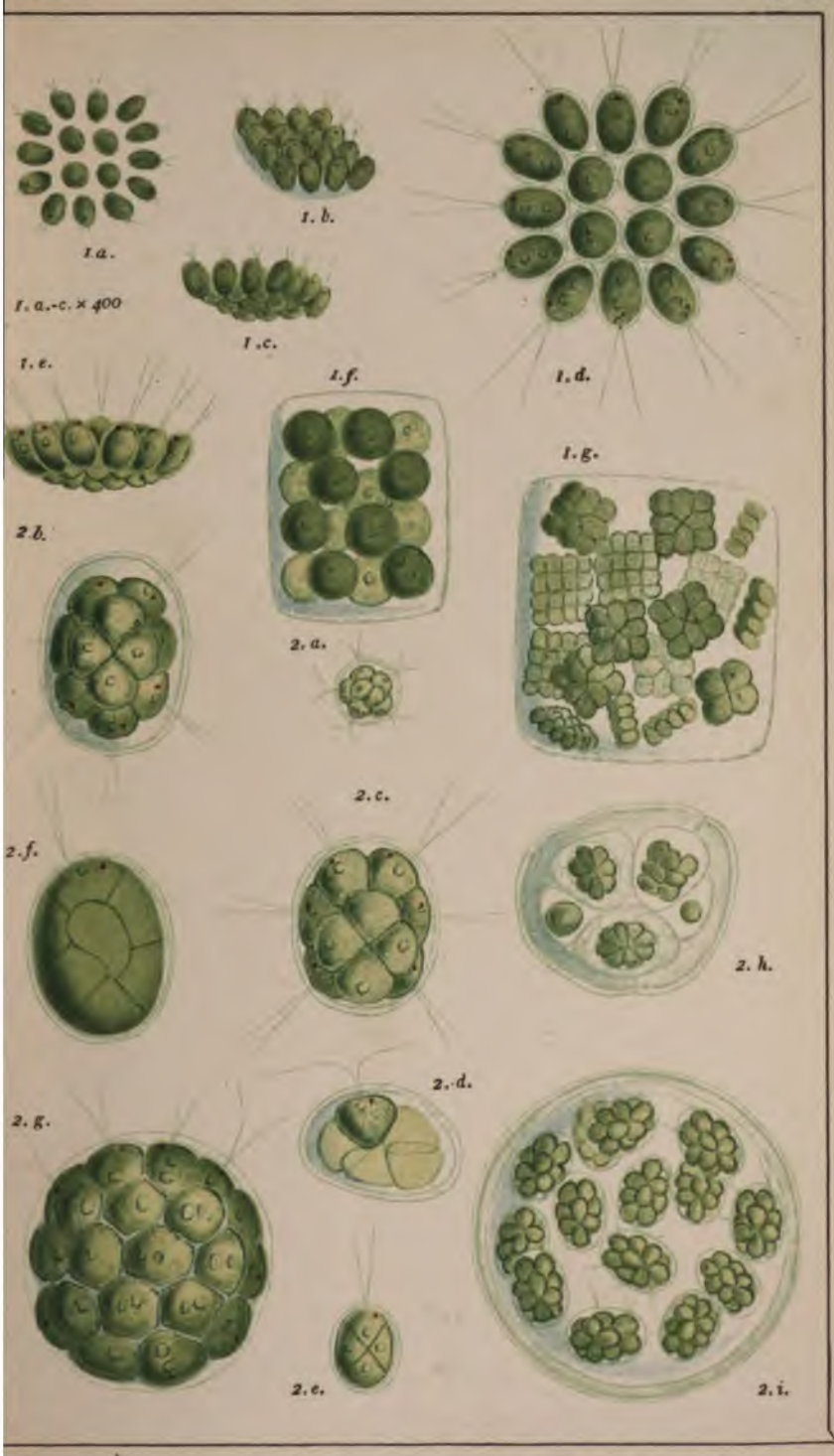




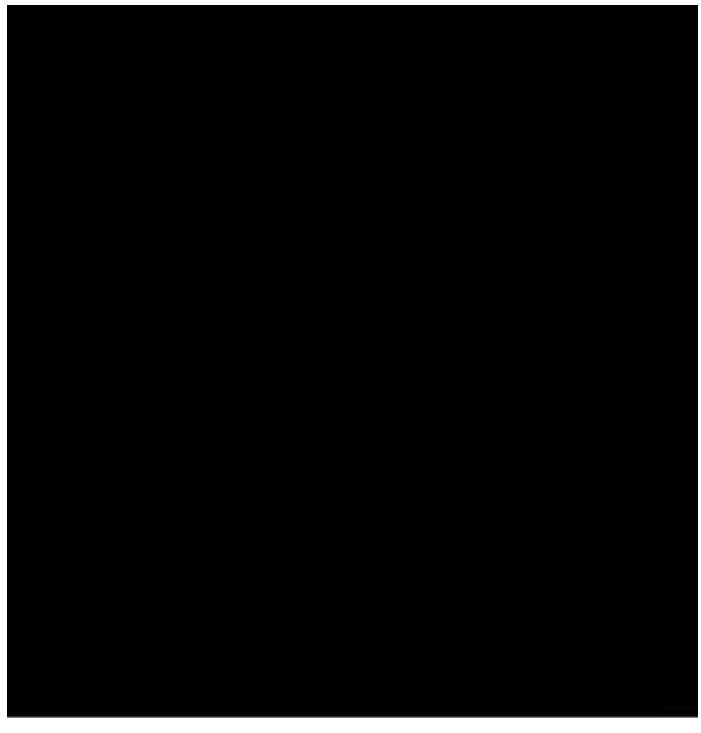
Eudorina elegans. Ehrb.

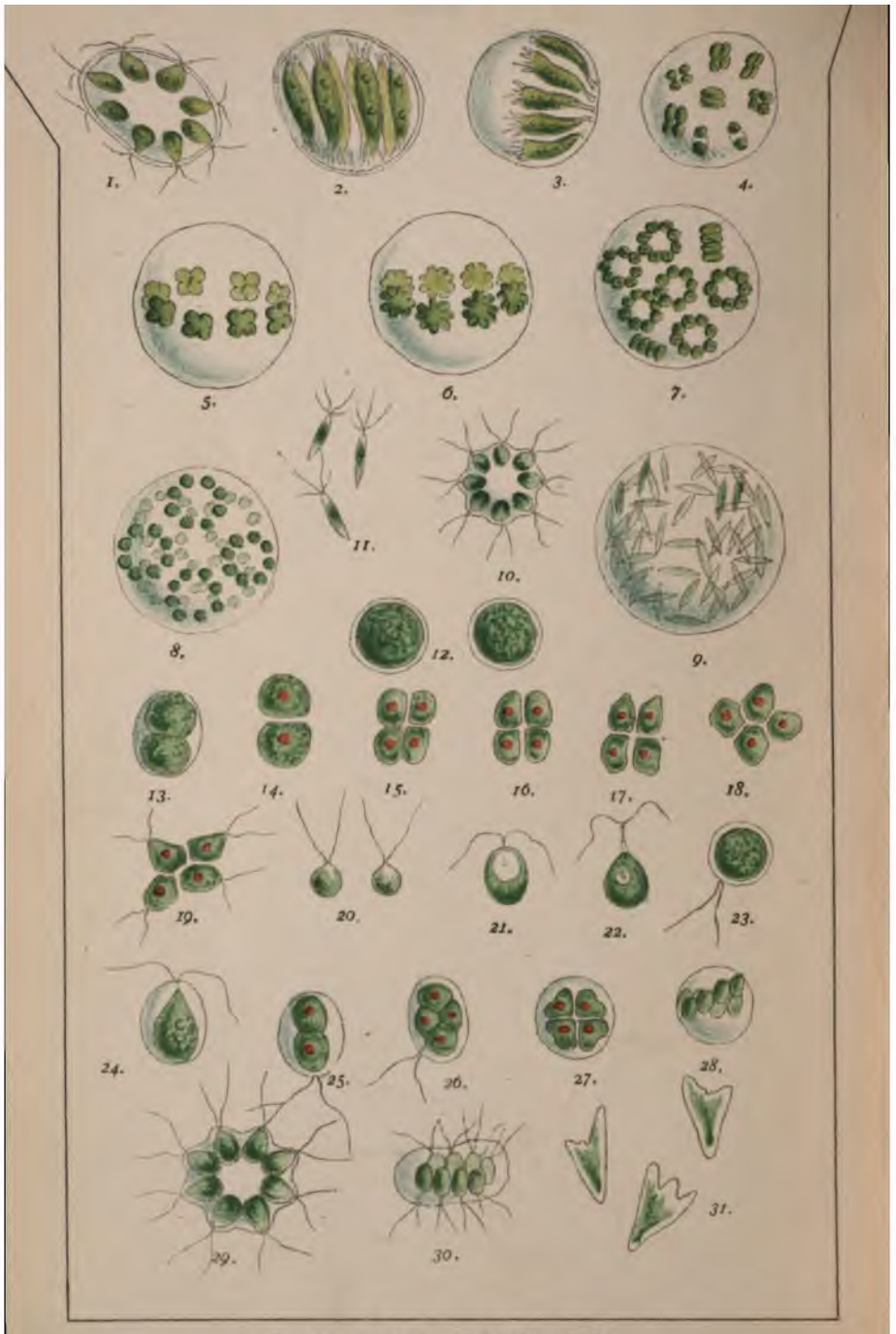




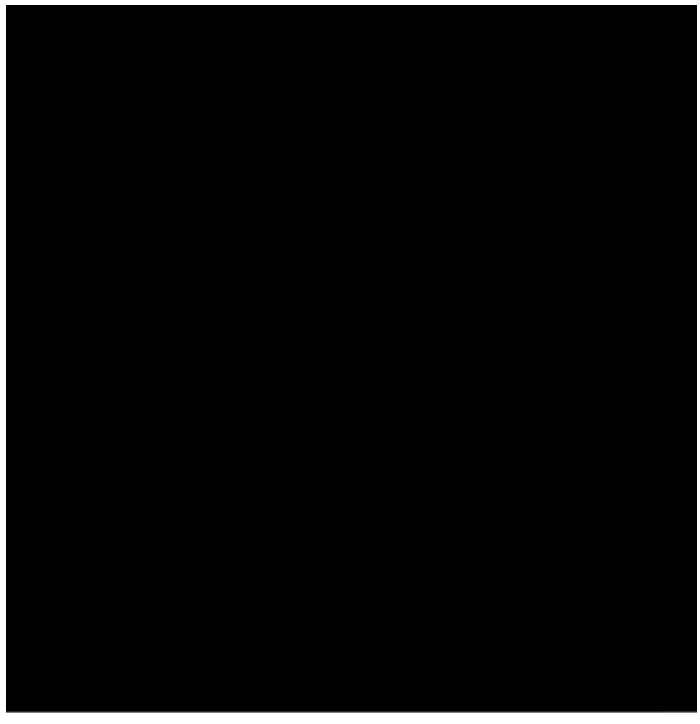


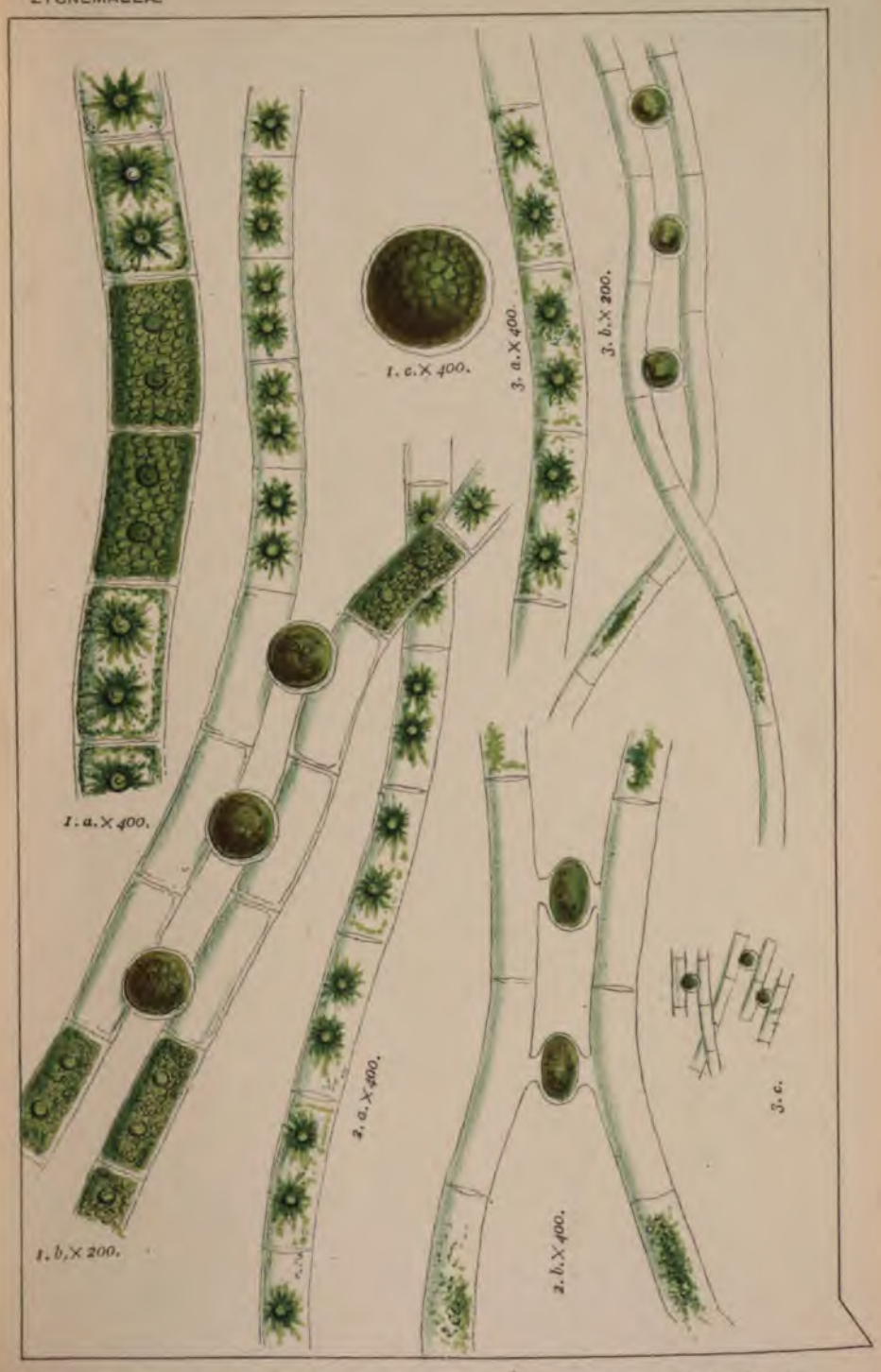
1. *Gonium pectorale. Mull.* 2. Pandorina morum. Bory.



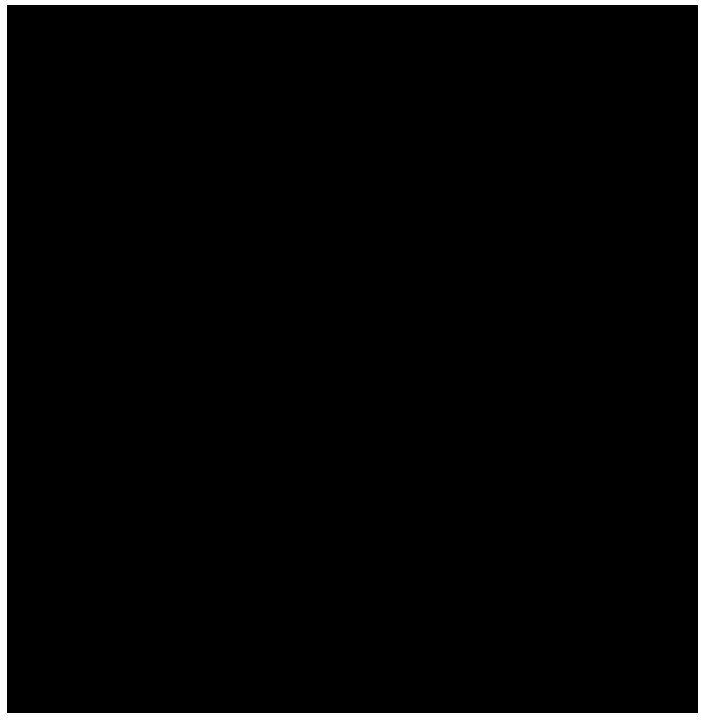


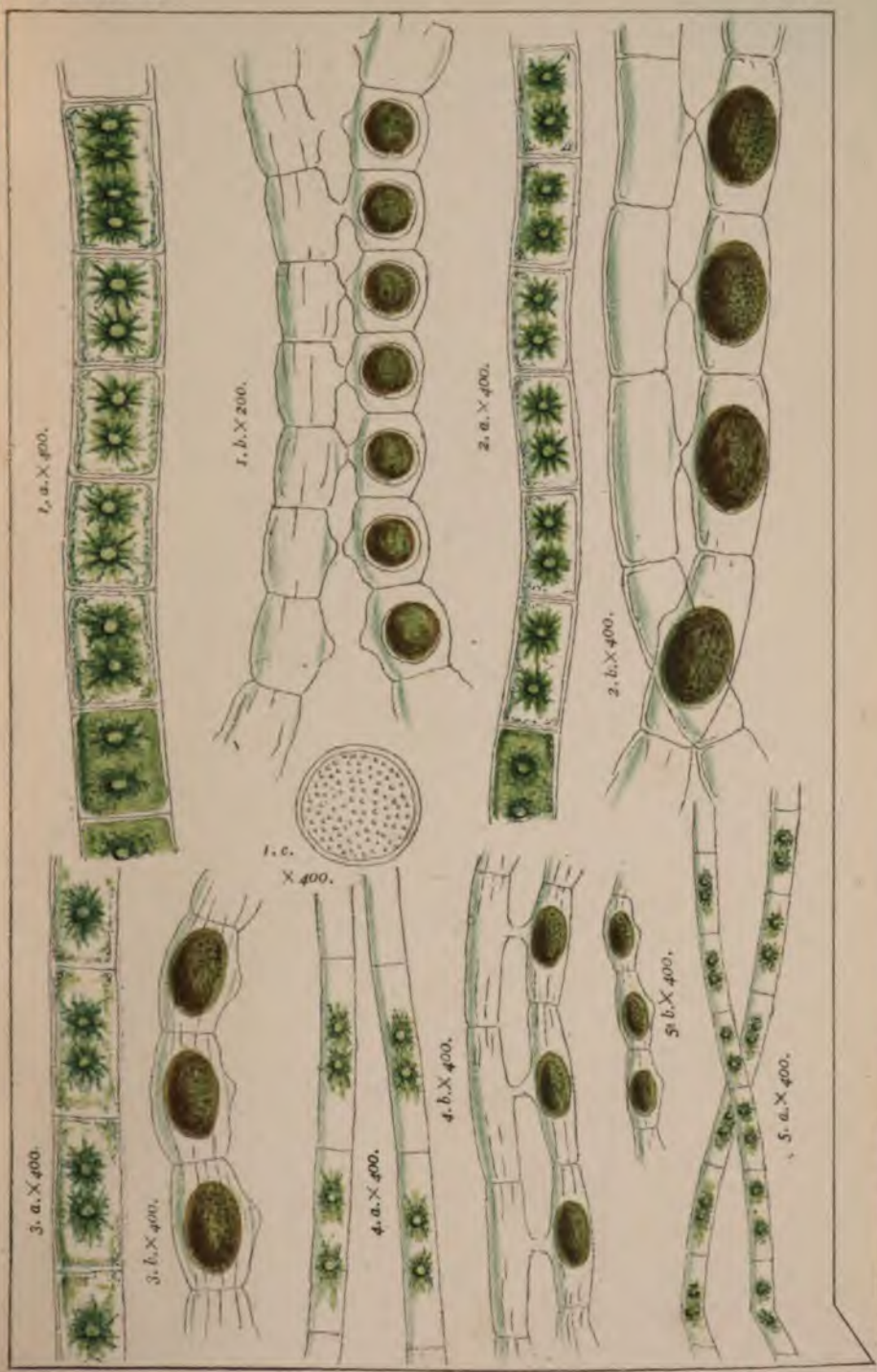
Stephanosphæra pluvialis. Cohn.



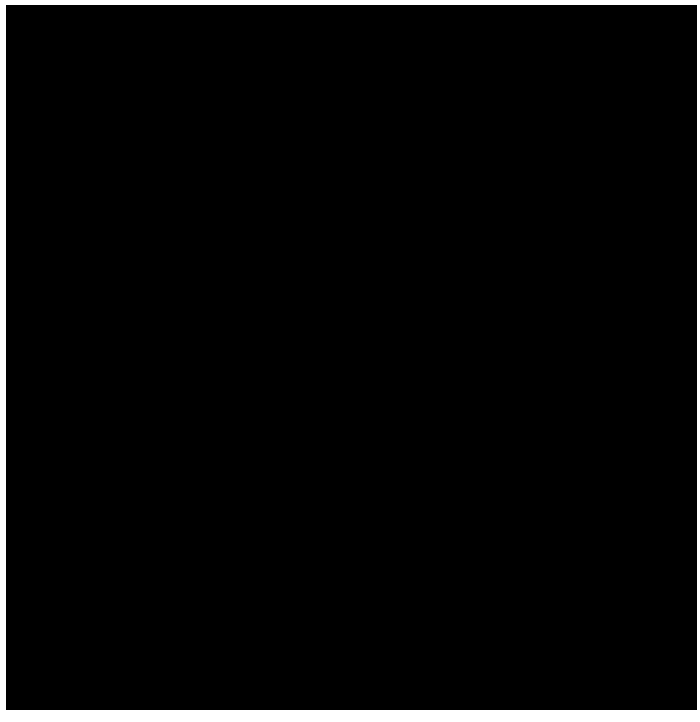


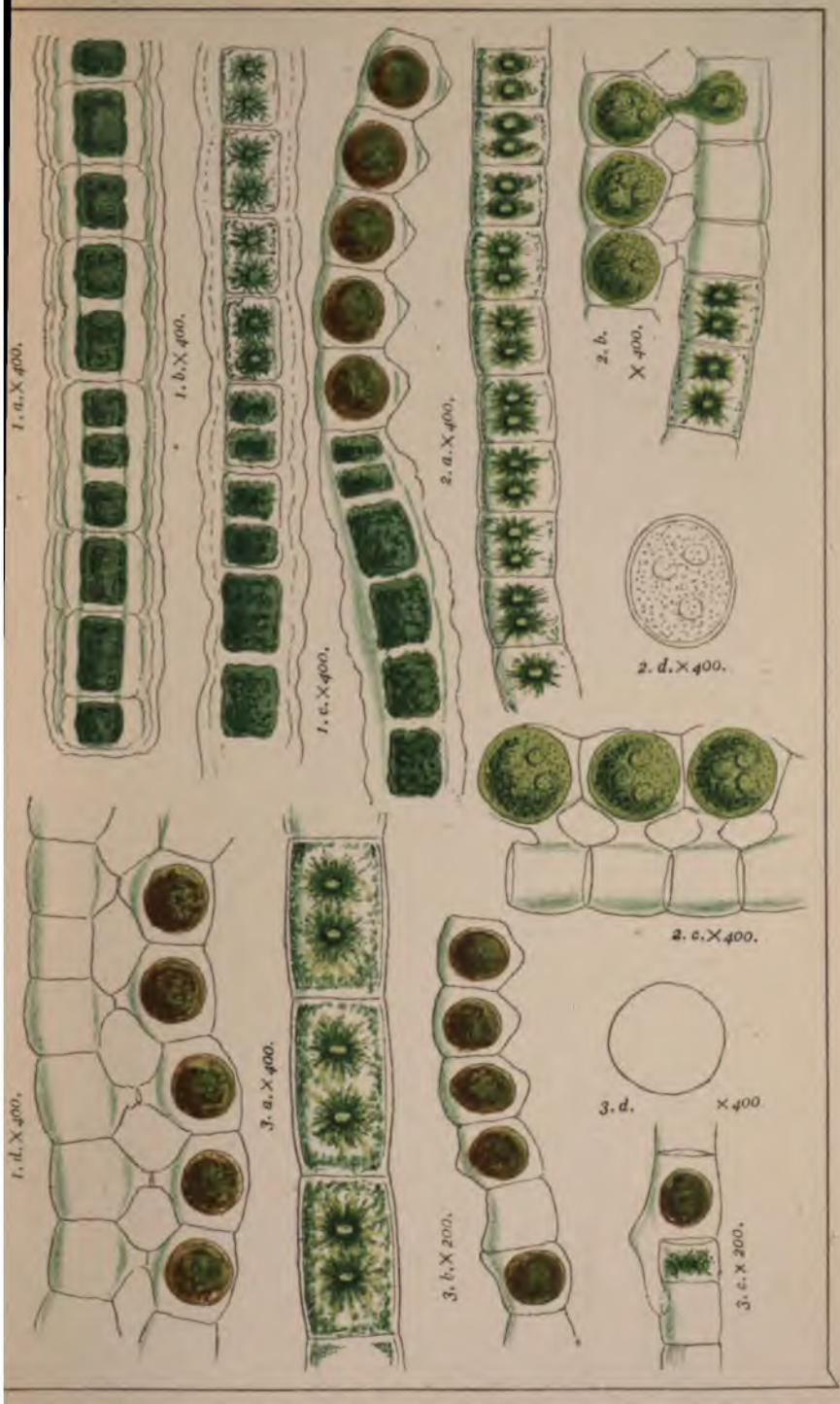
1. *Zygnema pectinatum. Ag.* 2. Zygnema Ralfsii. Hass.
3 *Zygnema parvulum.* Kutz.



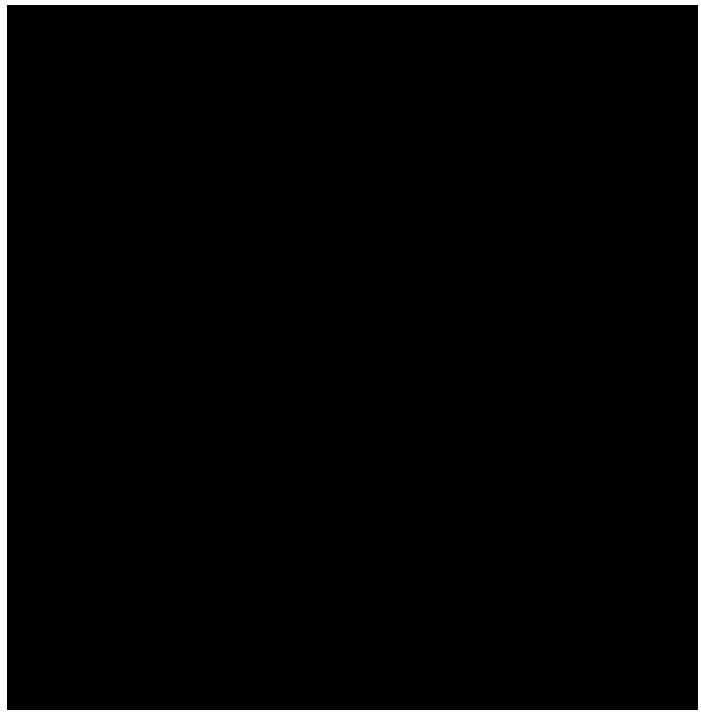


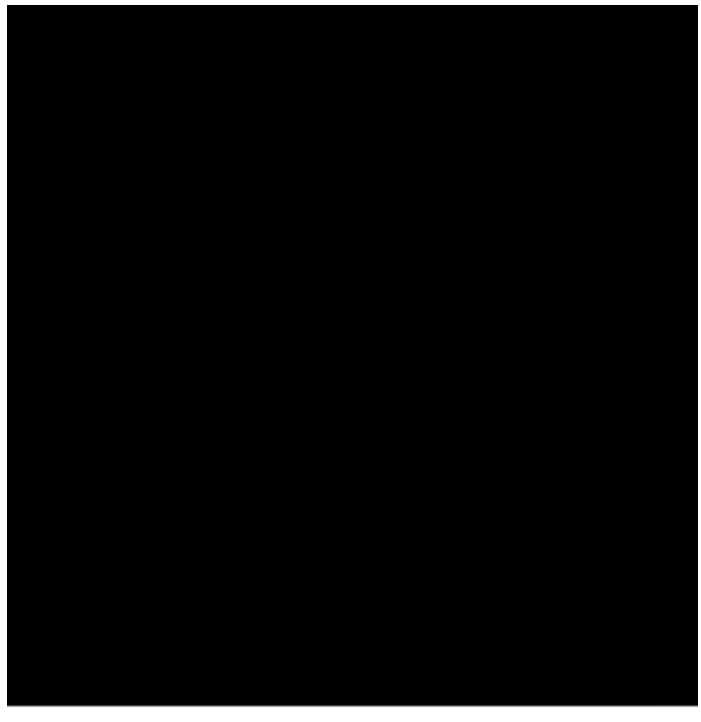
1. *Zygnema cruciatum. Ag.* 2. Zygnema stellinum. Vauch.
3. *Zygnema Vaucheri. Ag.* 4. var. subtile. 5. var. stagna

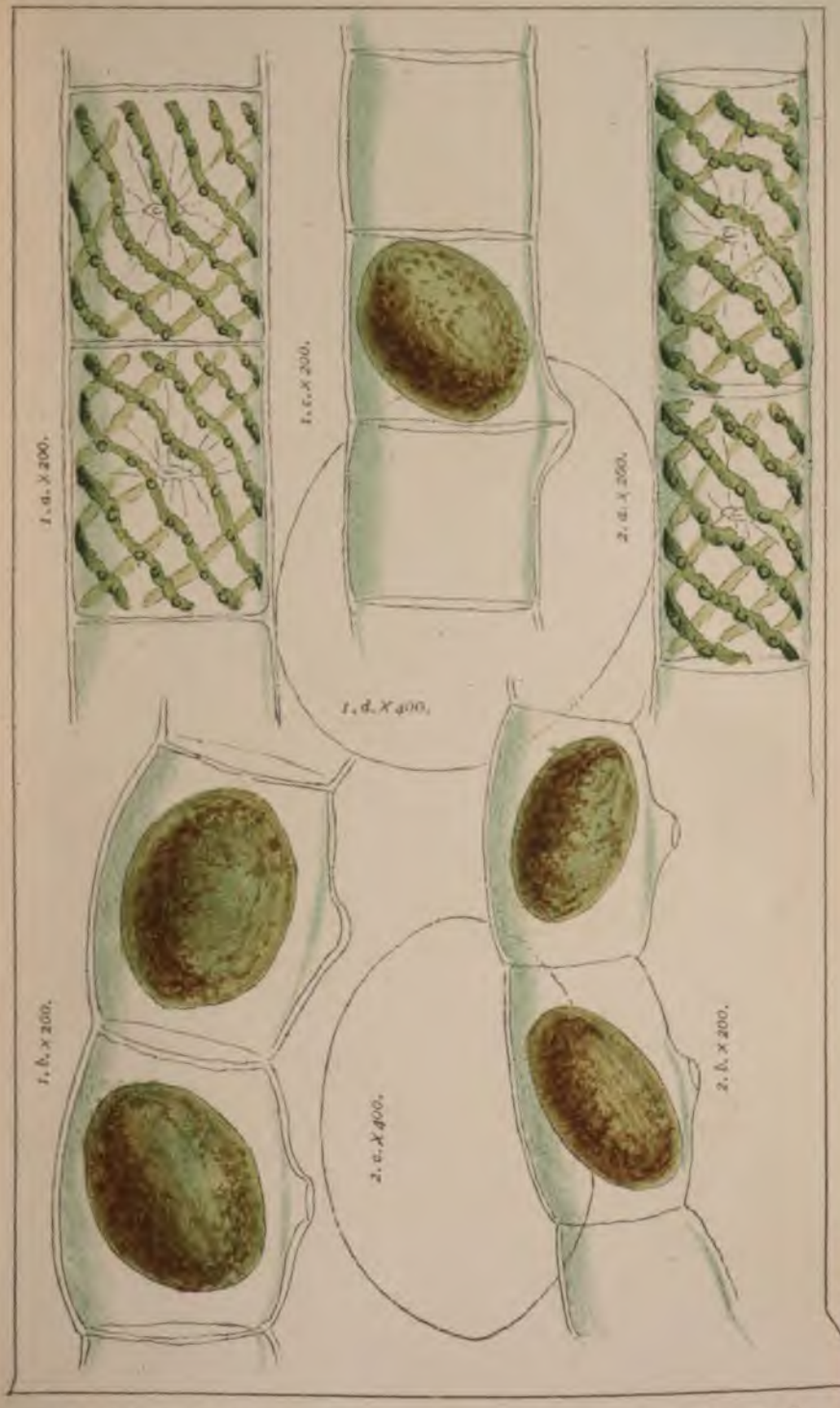




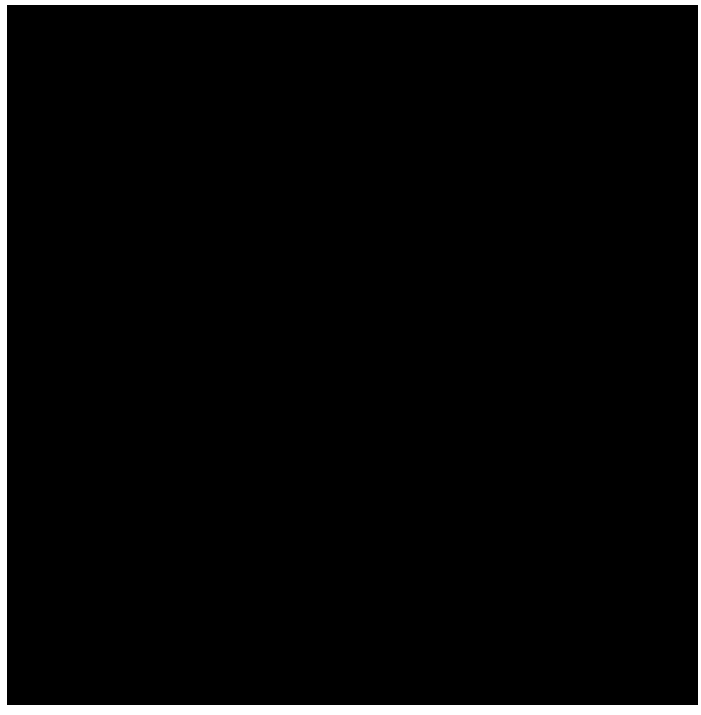
1. *Zygnema anomalum.* Ralfs. 2. Zygnema leiospermum. DB.
3. *Zygnema insigne.* Kutz.

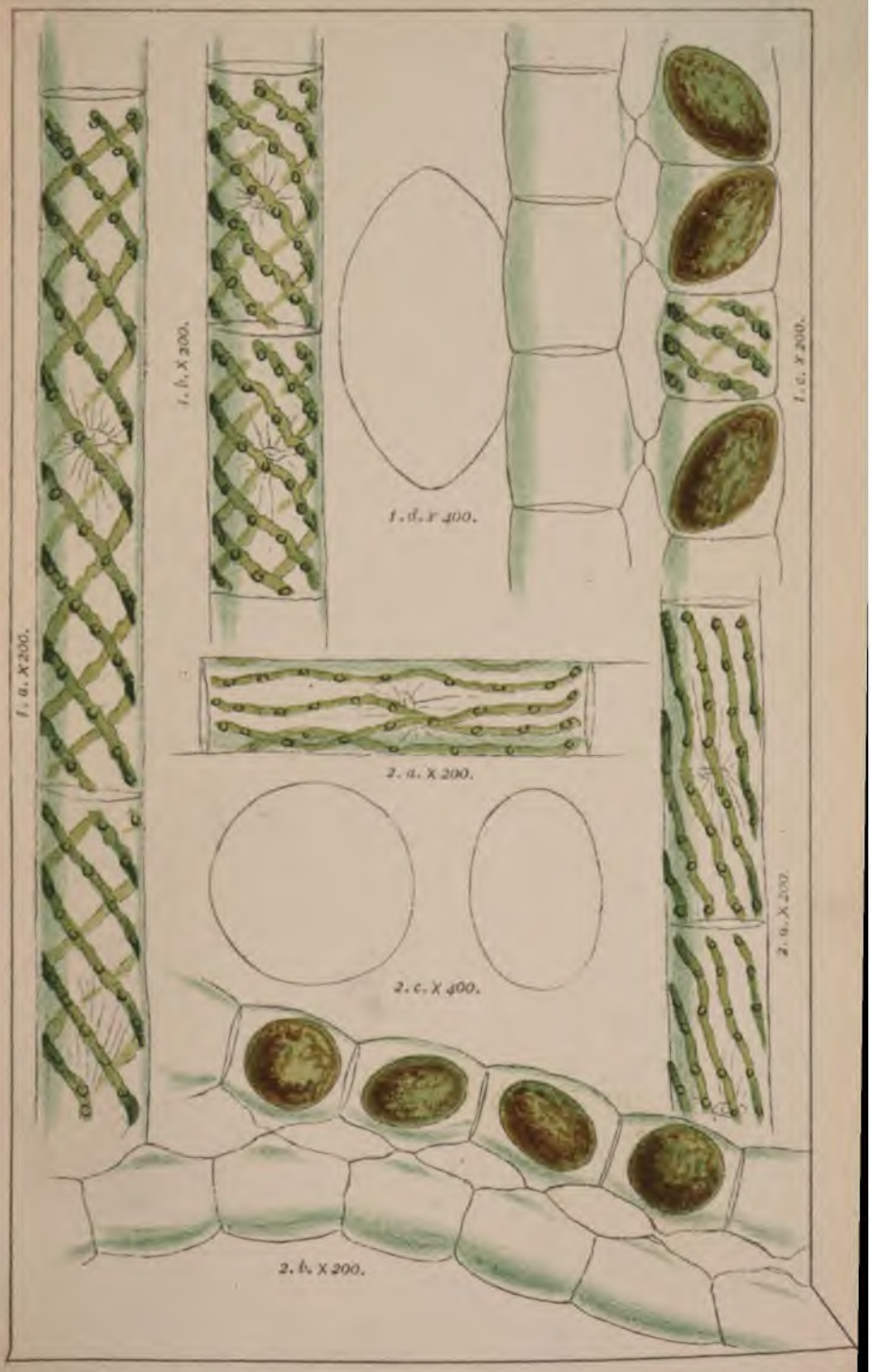




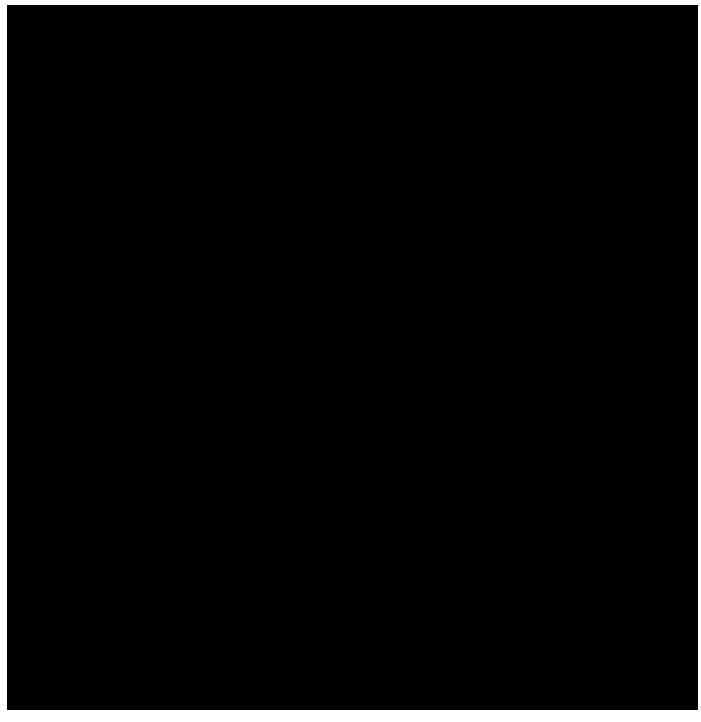


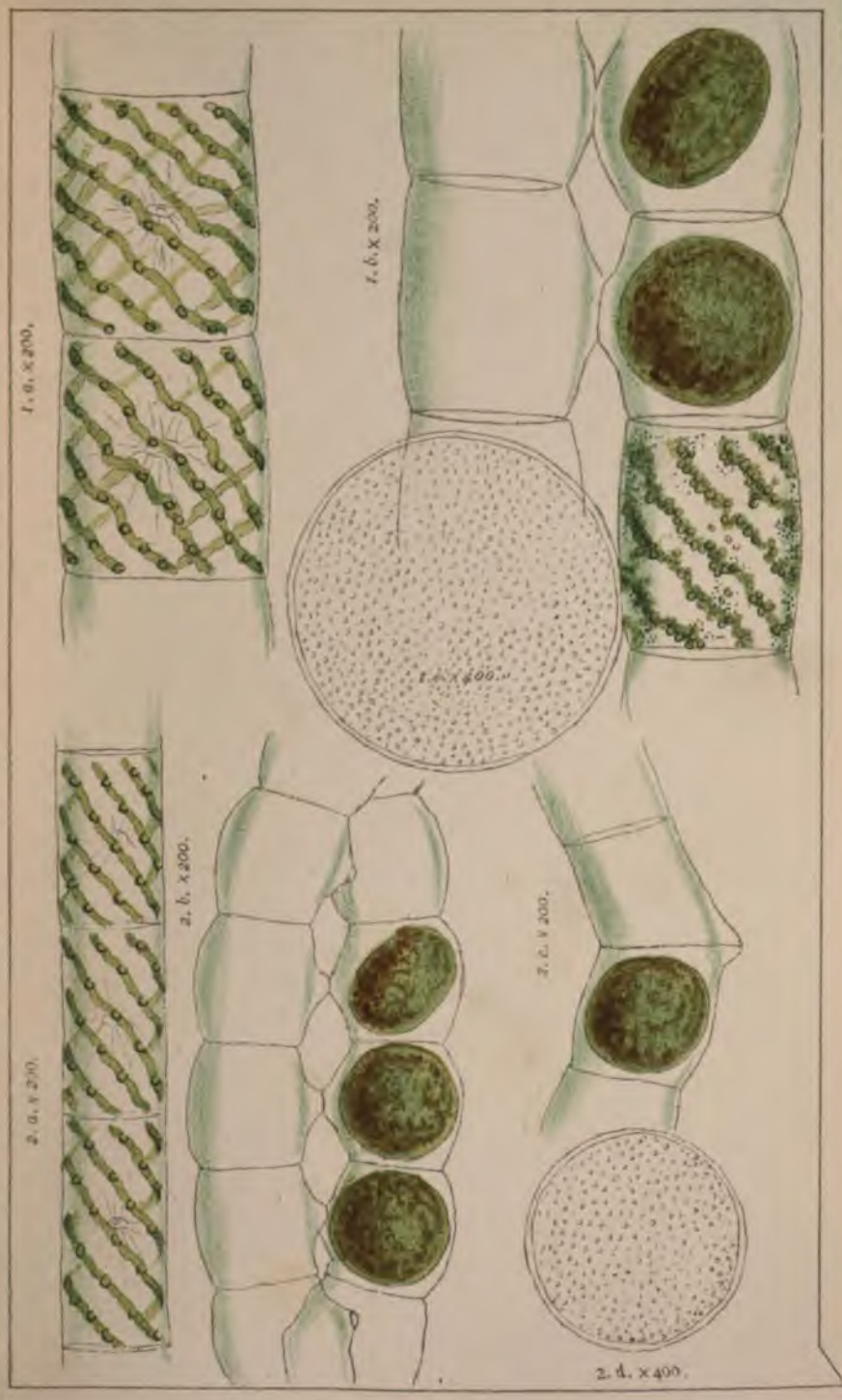
1. *Spirogyra crassa. Kutz.* 2. Spirogyra jugalis. (Dillw.



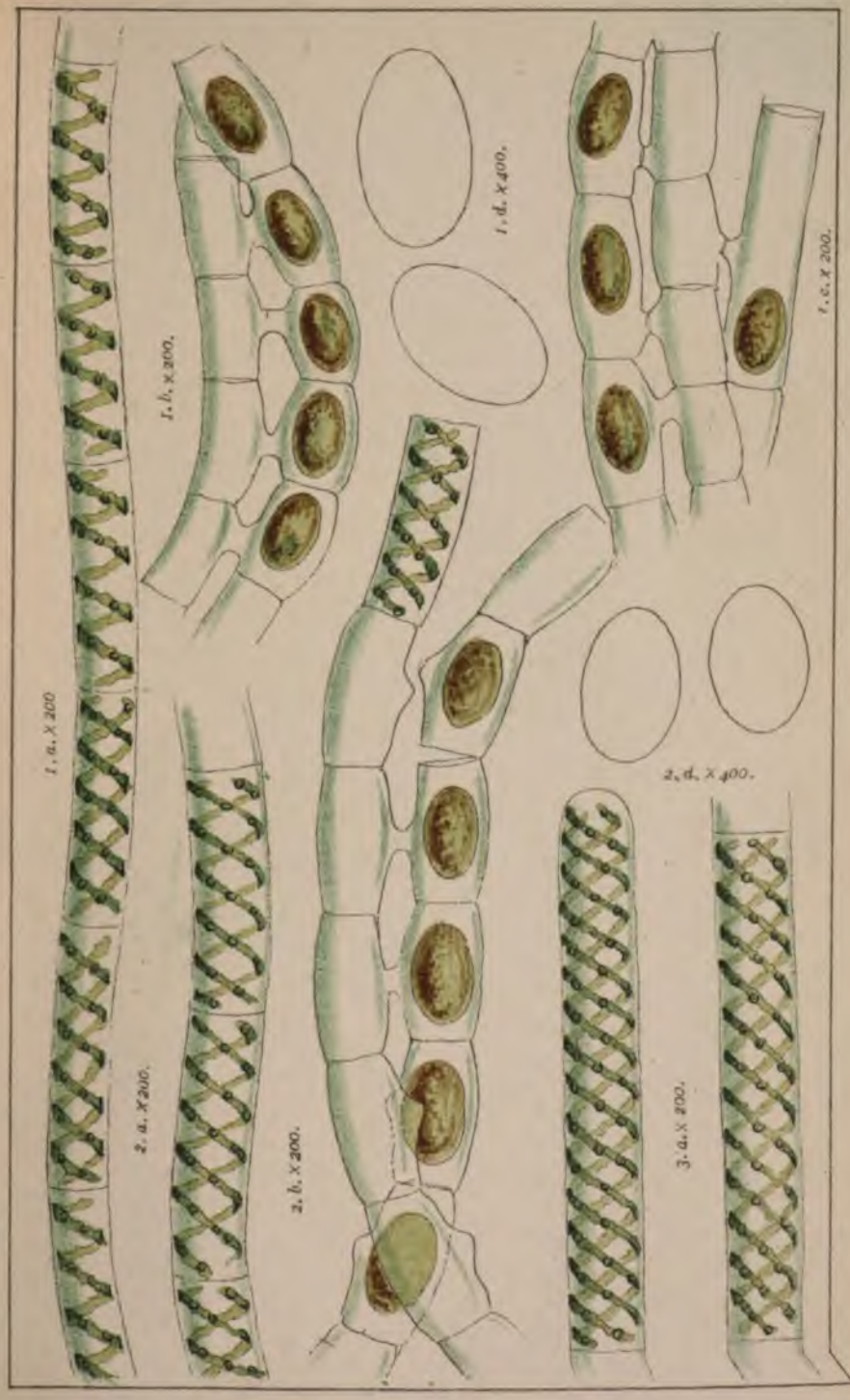


1. *Spirogyra nitida. Dillw.* 2. Spirogyra orthospira. Nag.



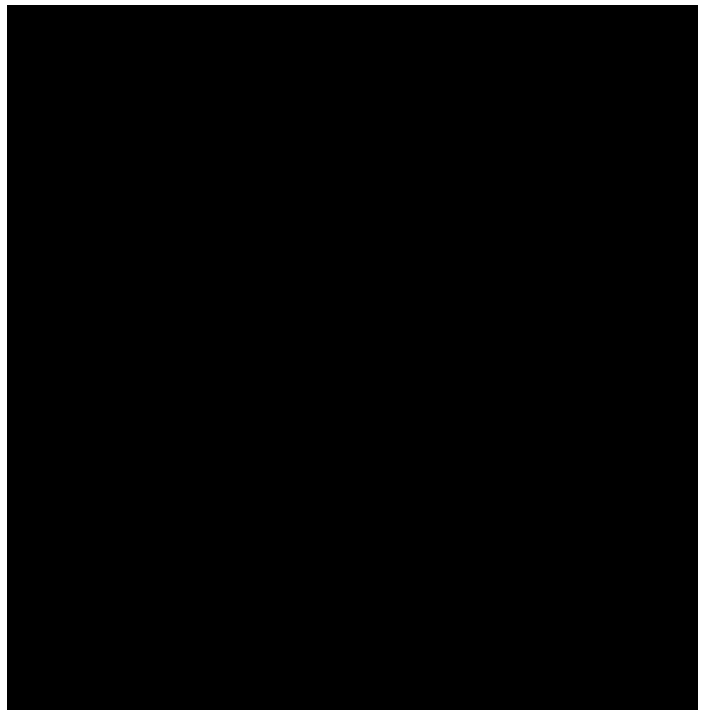


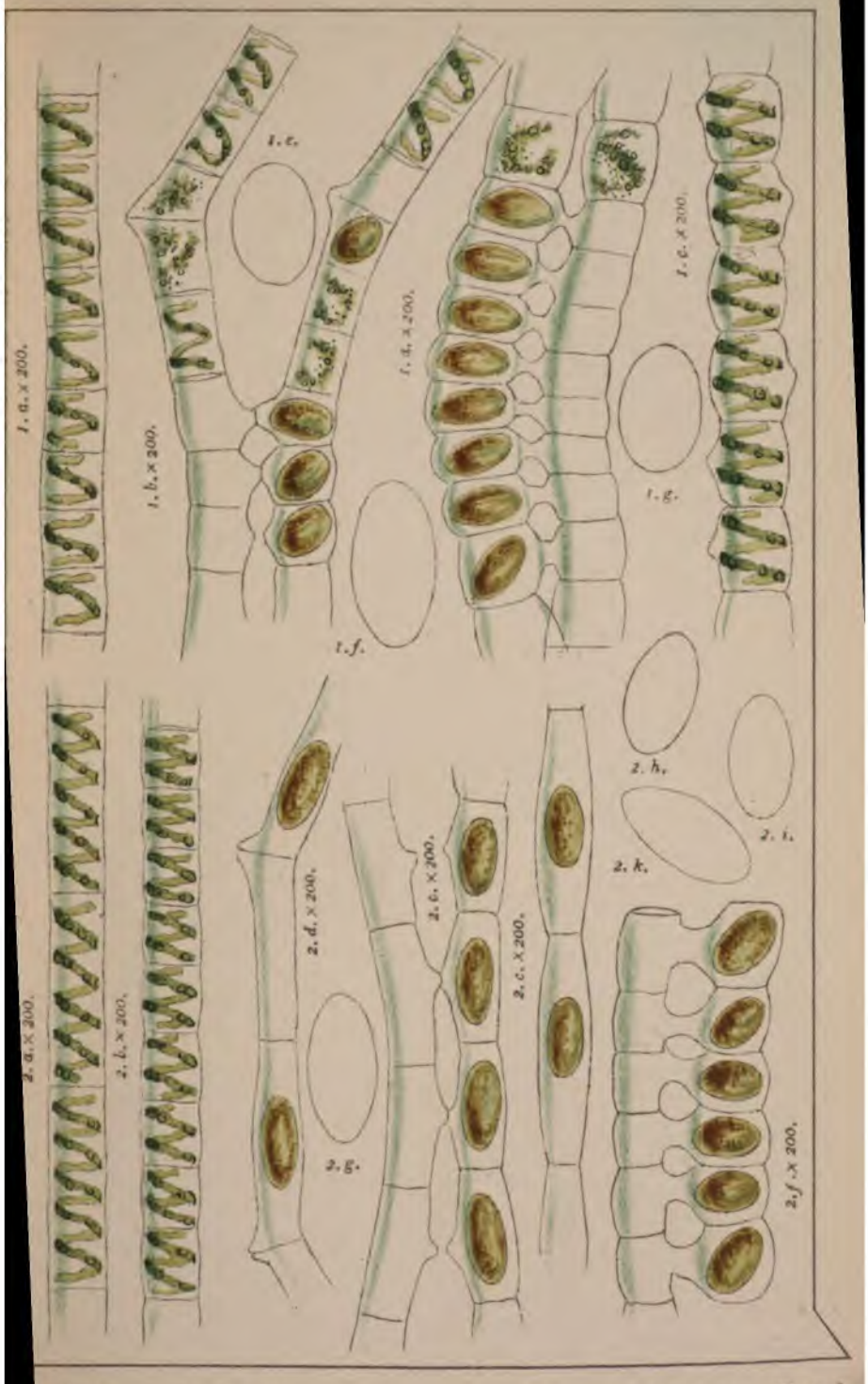
1. *Spirogyra orbicularis.* Hass. 2. Spirogyra bellis. Hass.



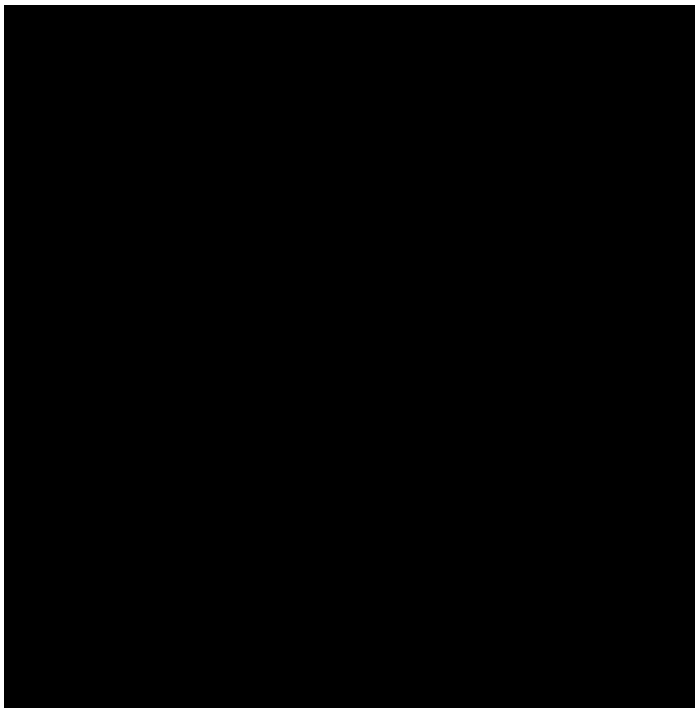
Spirogyra porticalis. Vauch.

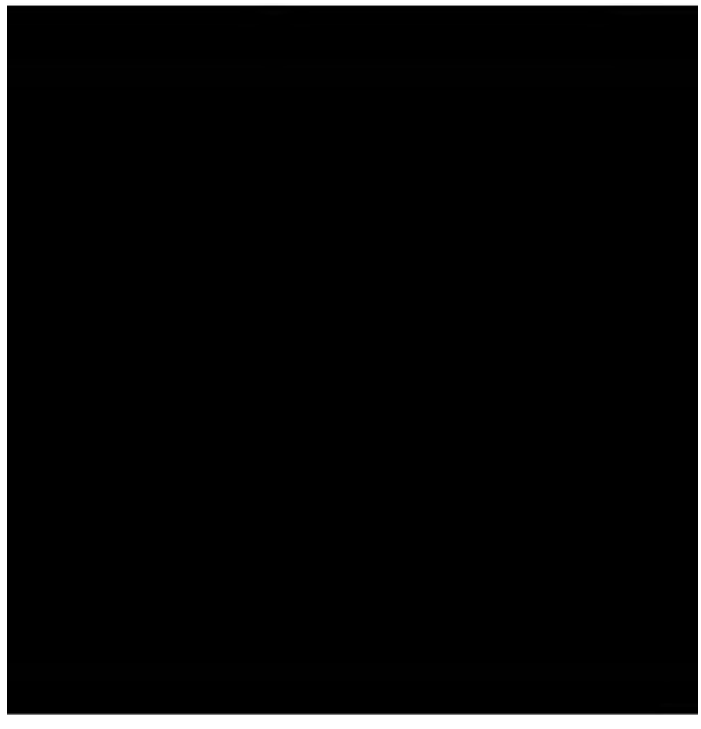
1. *forma quinina.* 2. *forma decimina.* 3. *forma rinularis*

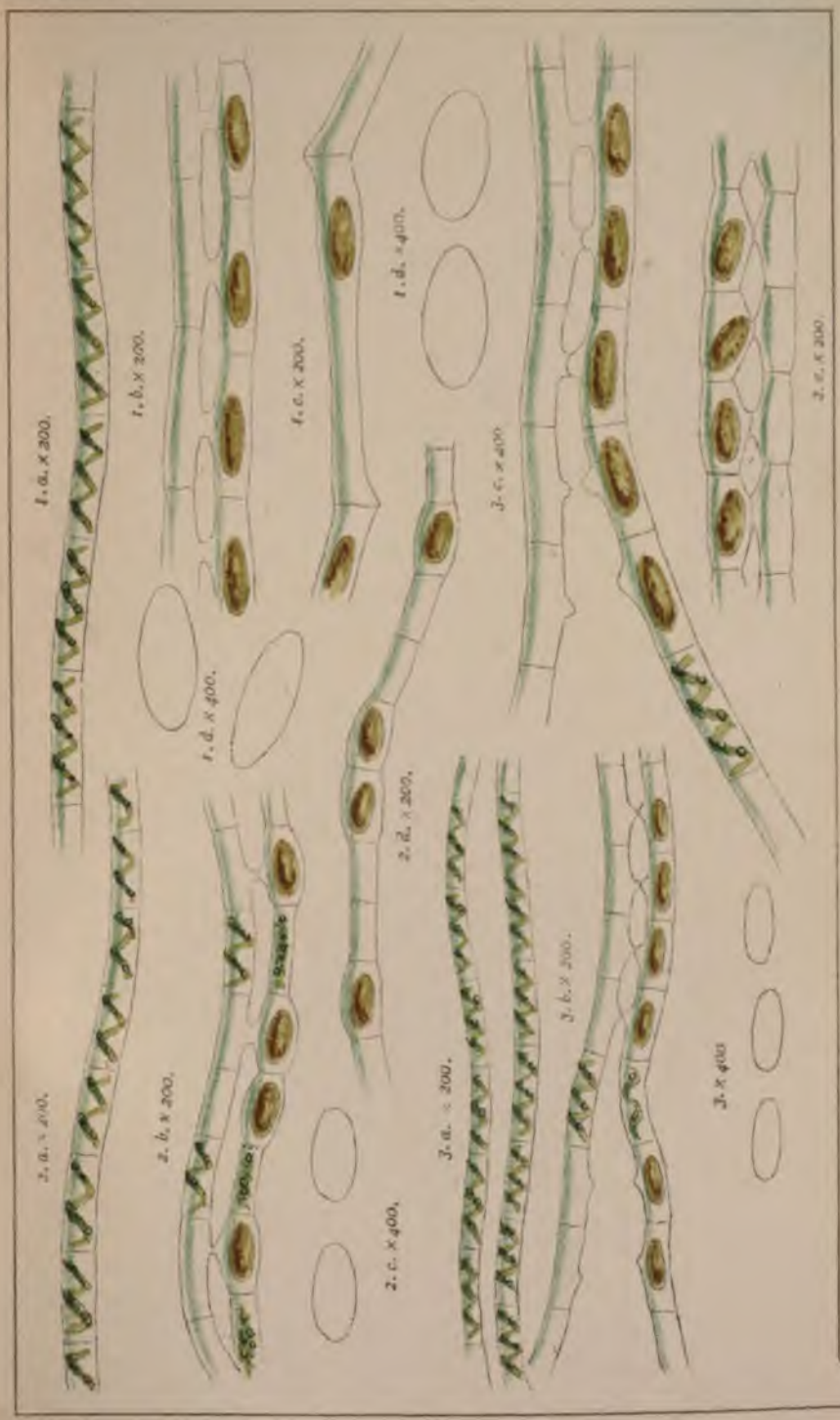




Spirogyra condensata. Vauch. 2. Spirogyra longata. Vauch.

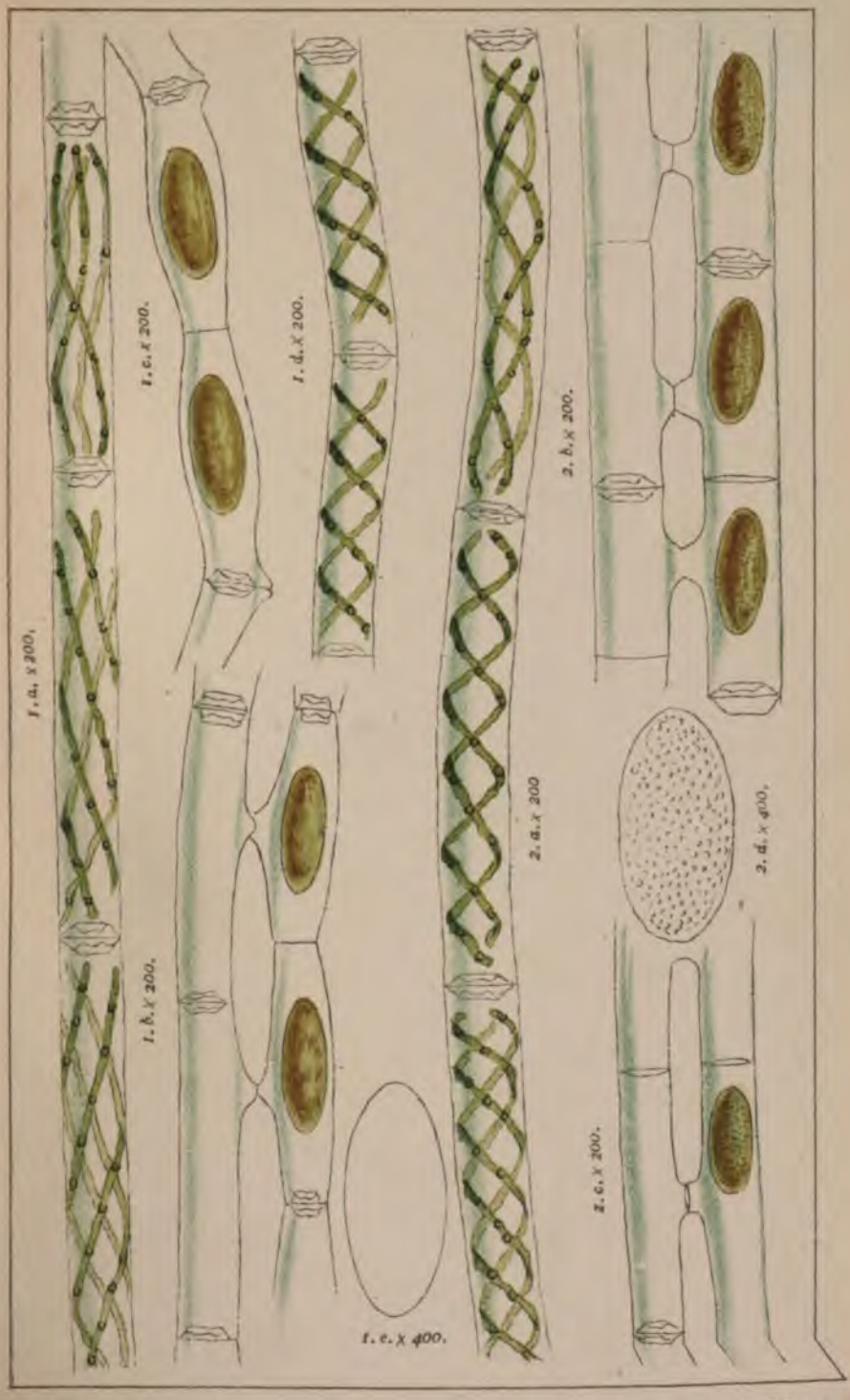




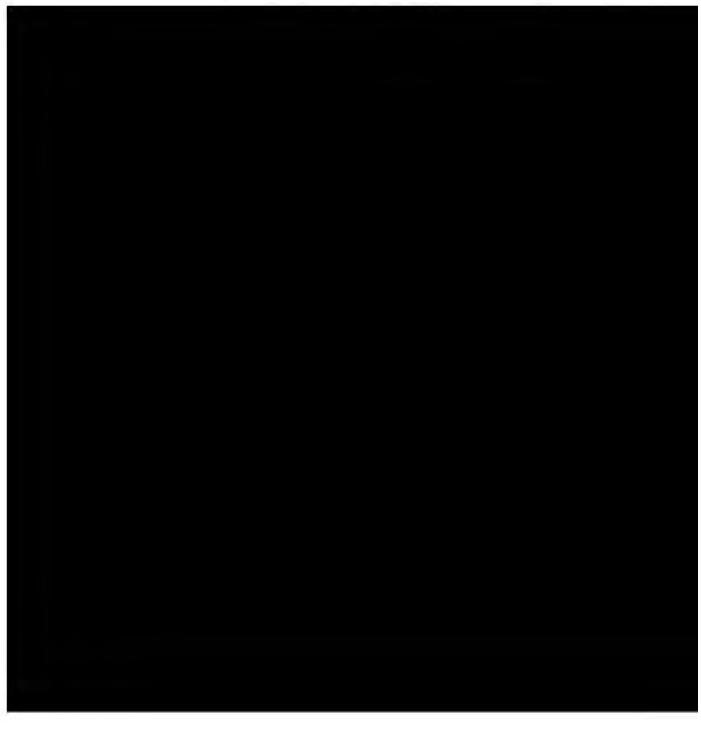


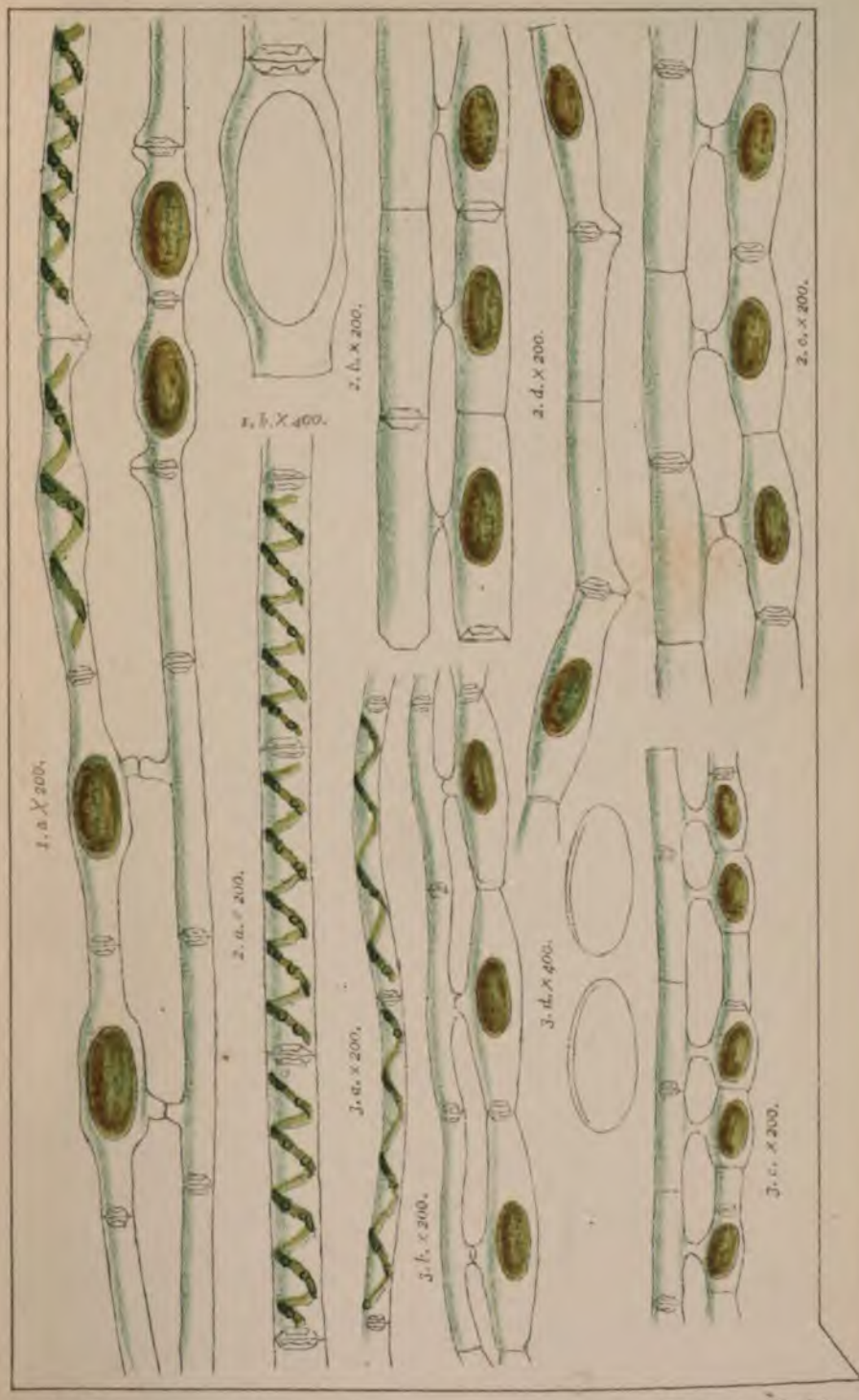
Spirogyra flavescens. Kutz.

1. var. *gracilis.* 2. var. *flavescens* 3. var parva.

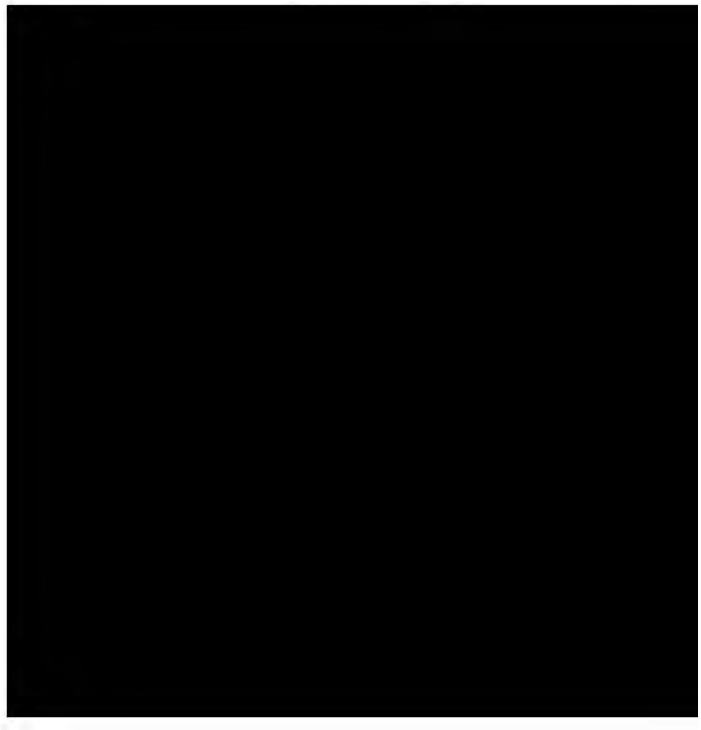


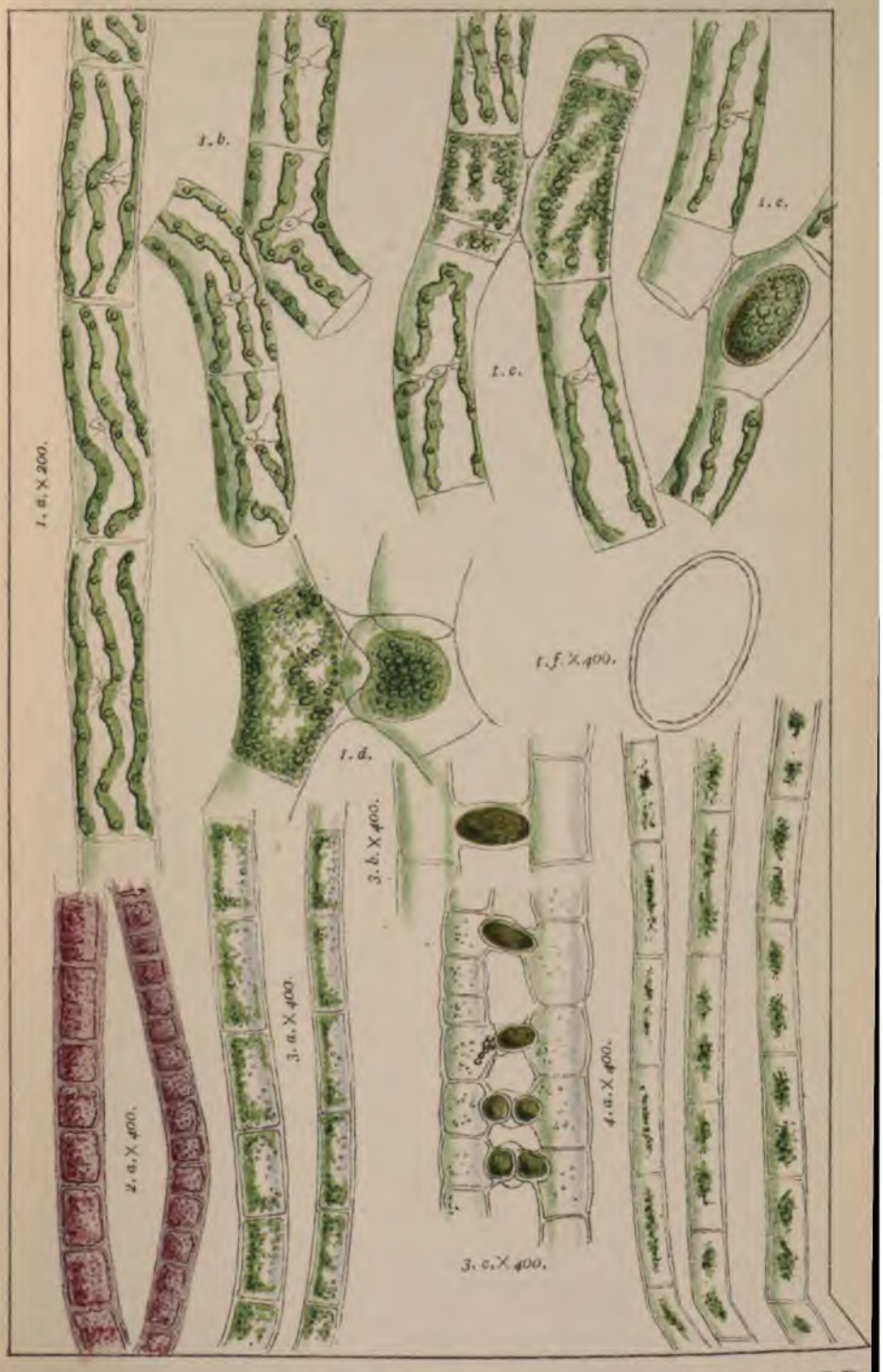
1. *Spirogyra insignis.* Hass. 2. Spirogyra calospora. Cleve.



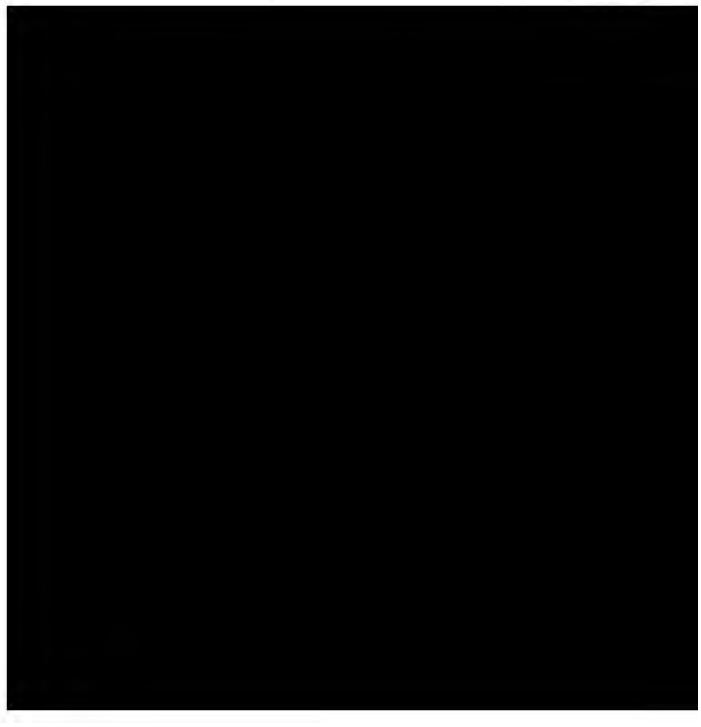


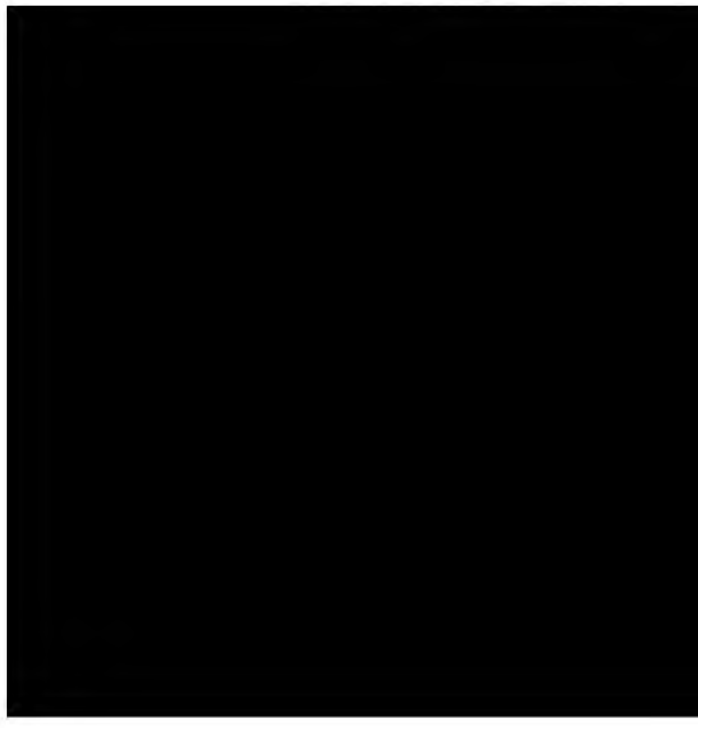
1. *Spirogyra quadrata. Hass.* 2. Spirogyra Weberi. Kutz.
3. *Spirogyra tenuissima. Hass.*

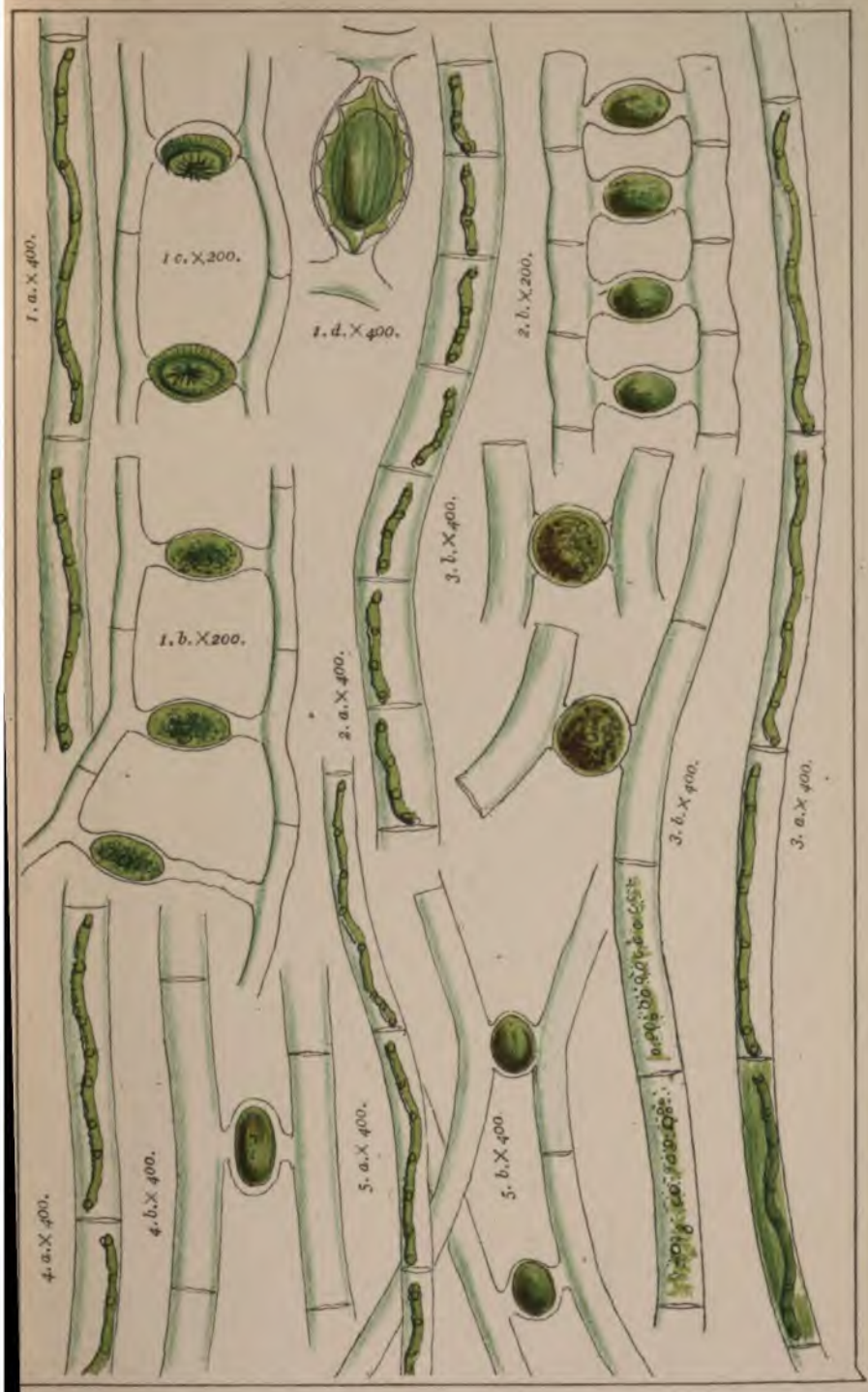




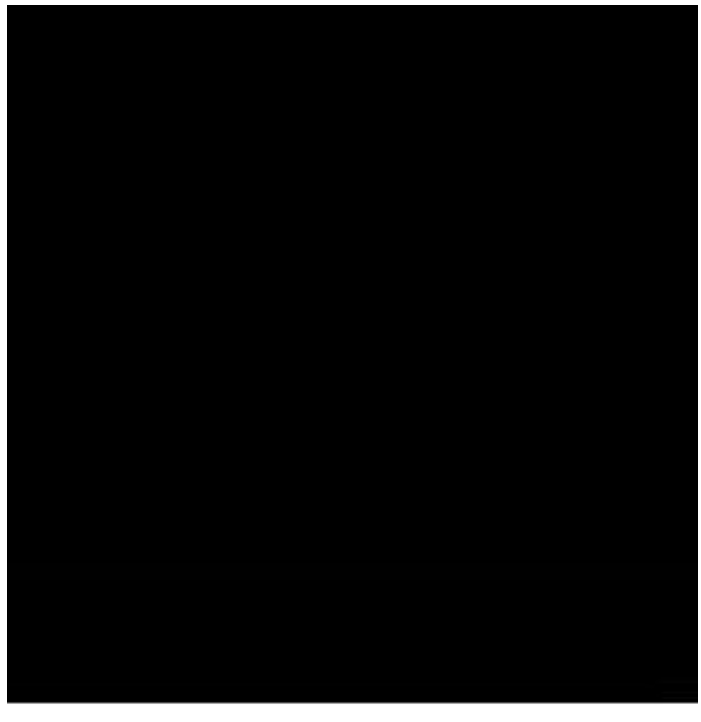
1. *Sirogonium sticticum. Kutz.* 2. Zygogonium ericetorum. ⊕Br
3. *Z. ericetorum, var. aquaticum.* 4. Zygogonium gracile. Berk.

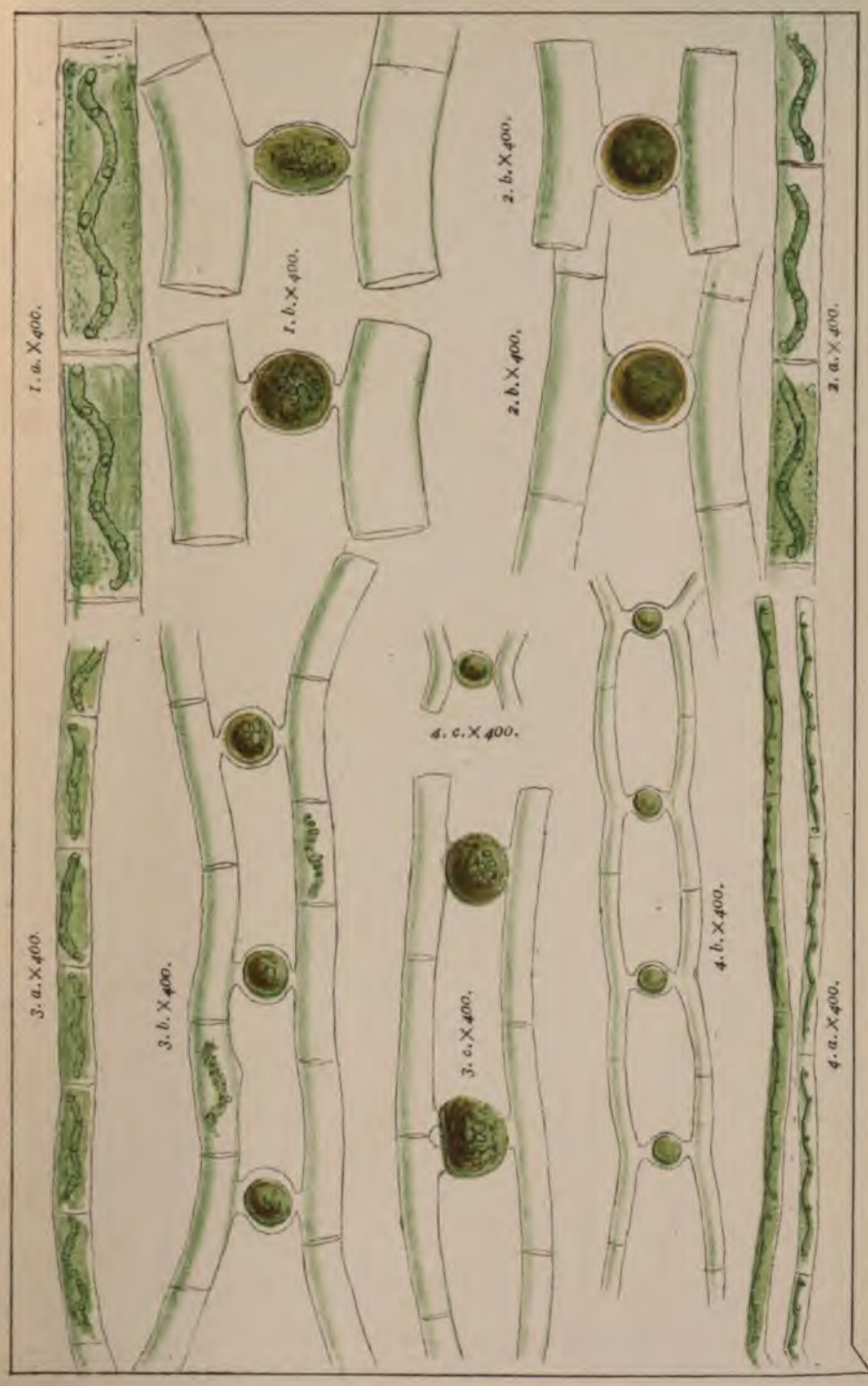




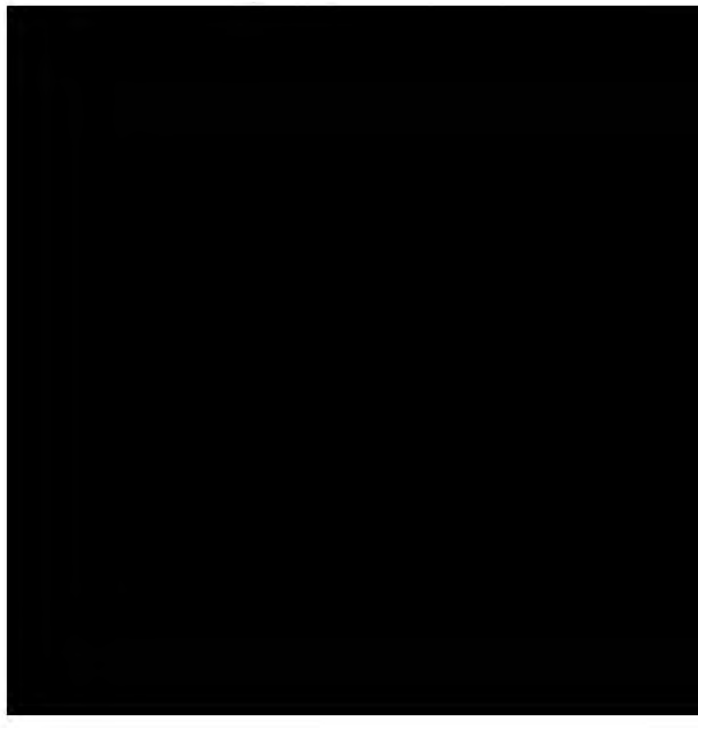


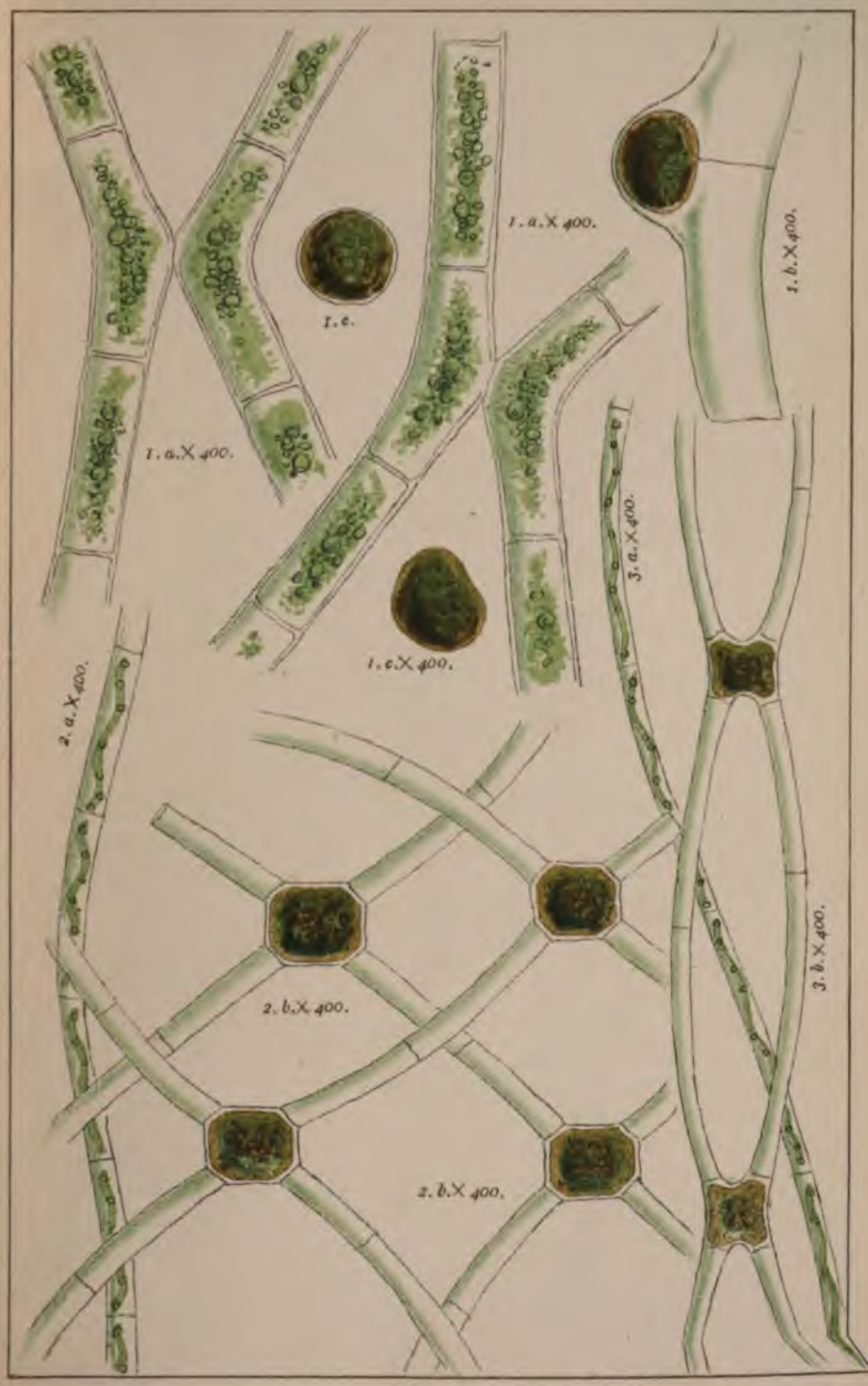
1. *Mougeotia glyptosperma.* (By. 2. Mougeotia lævis. Archer.
3. *Mesocarpus nummuloides.* Hass. 4. Mesocarpus depressus. Hass.
Mesocarpus depressus, var. ovalis.



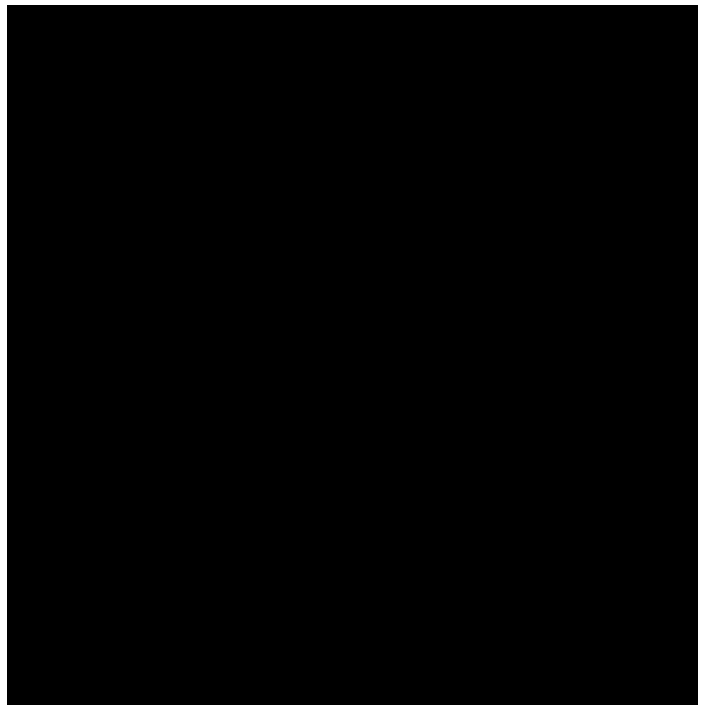


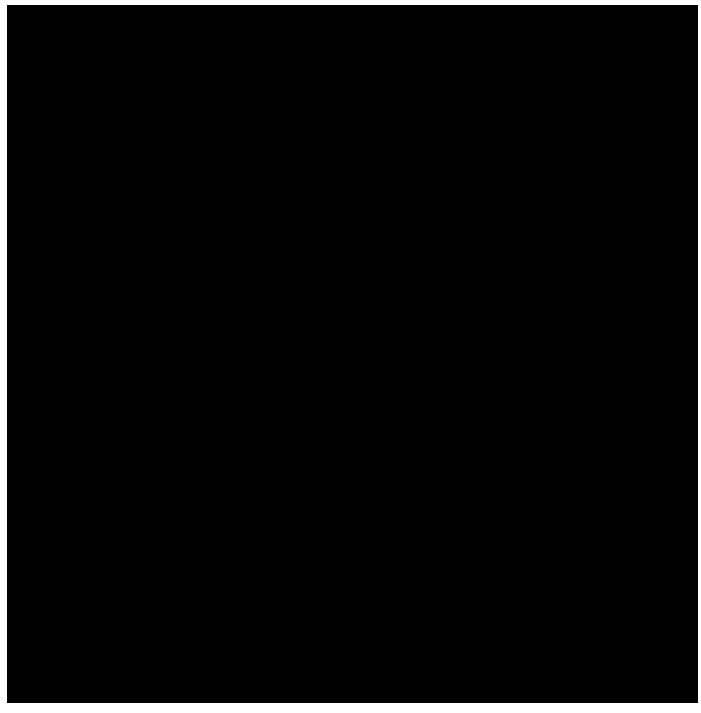
1. *Mesocarpus scalaris. Hass.* 2. *Mesocarpus recurvus. Hass.*
3. *Mesocarpus parvulus. Hass.* 4. *M. parvulus, var. angustus. Ho*

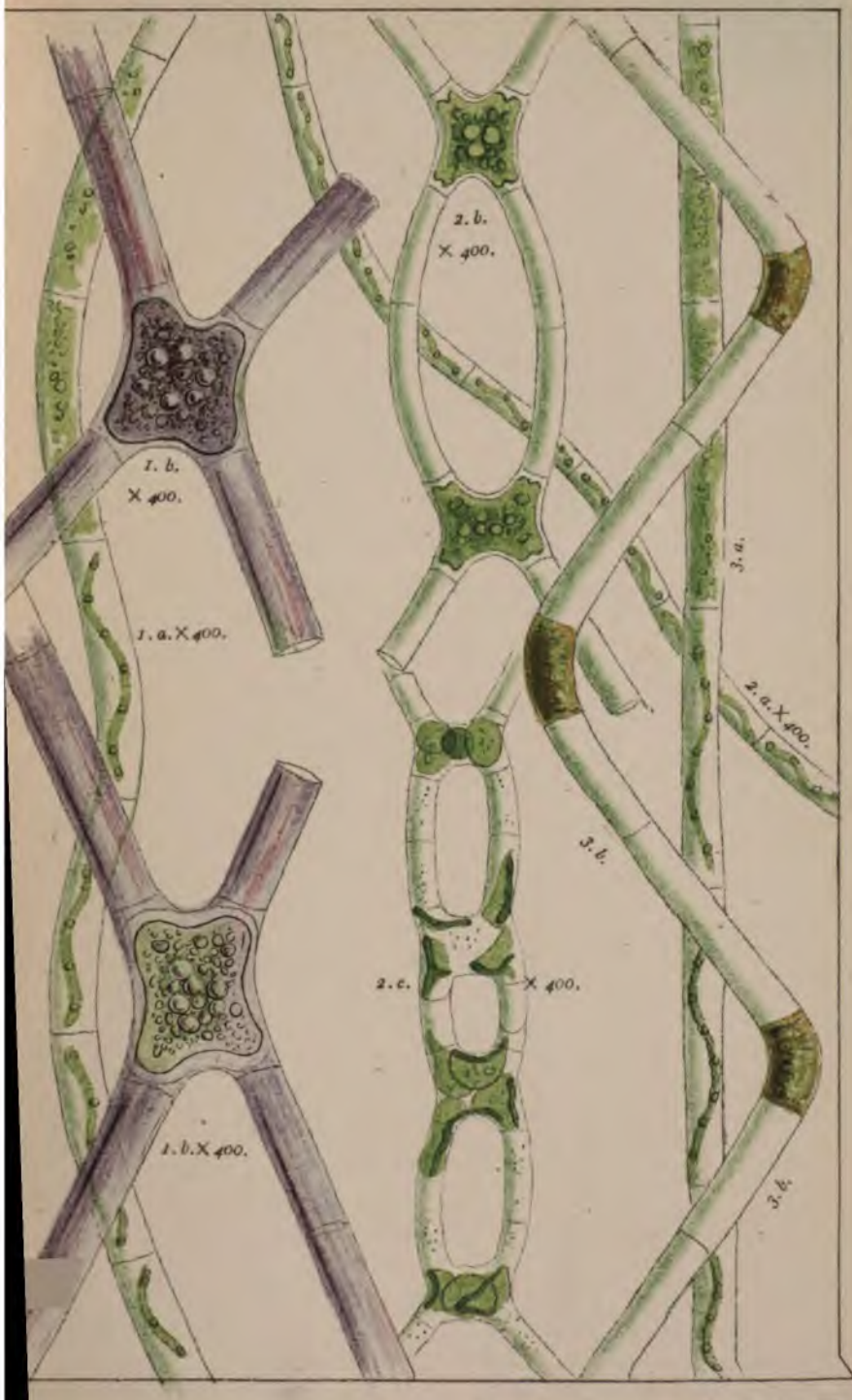




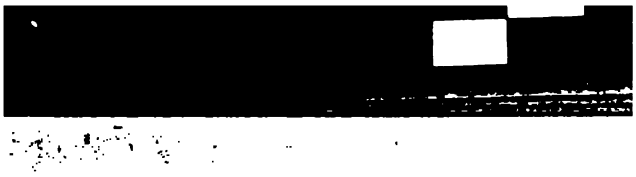
1 *Mesocarpus pleurocarpus.* (DBy. 2. Staurospermum quadratum. H
3. *Staurospermum gracillimum.* Hass.

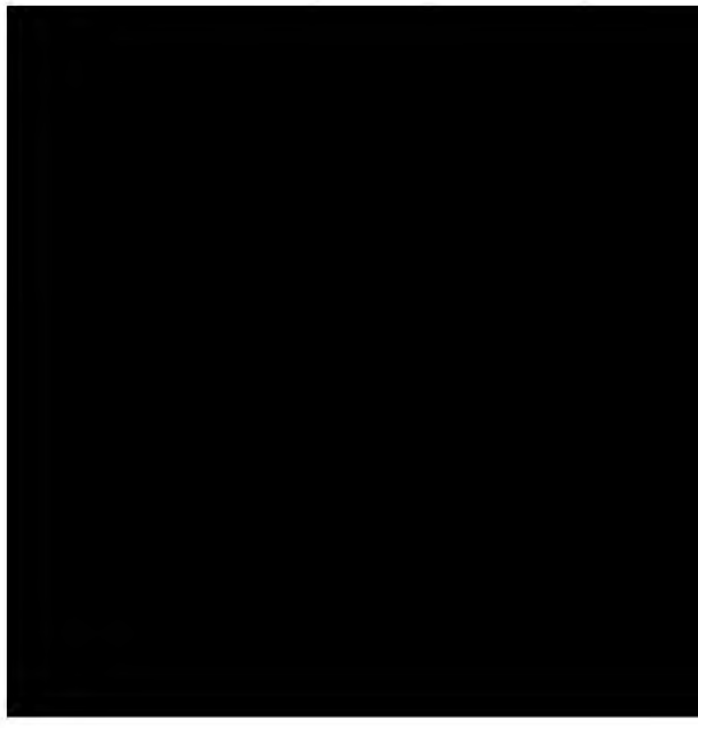


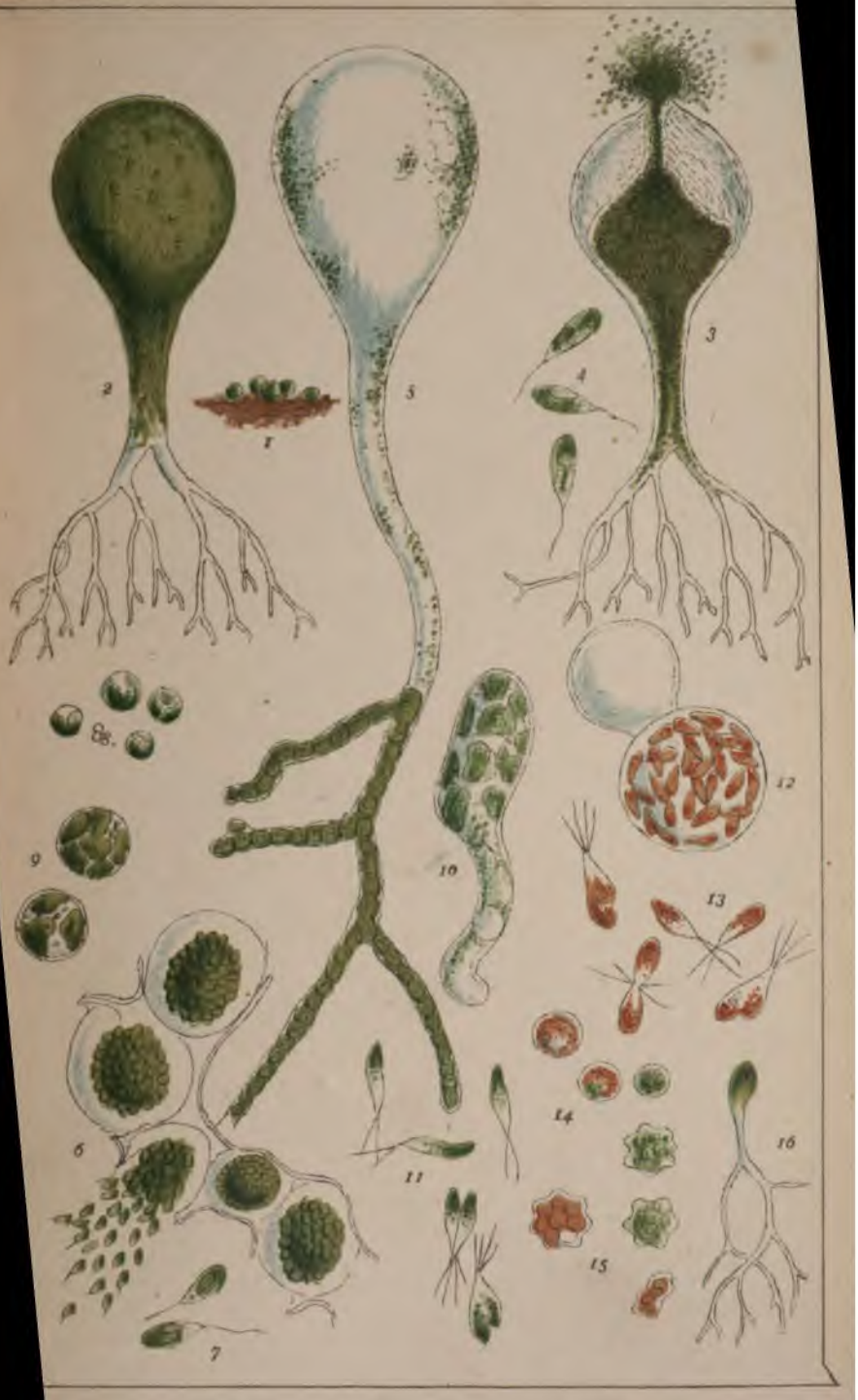




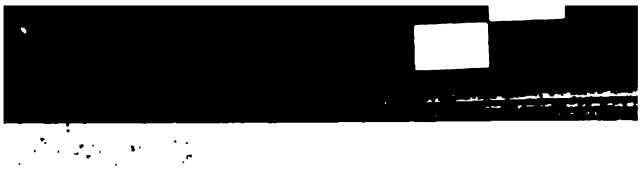
Staurospermum capucinum. Bory. 2. Staurospermum viride. Kutz
3. *Gonatonema mirabile.* Hass.

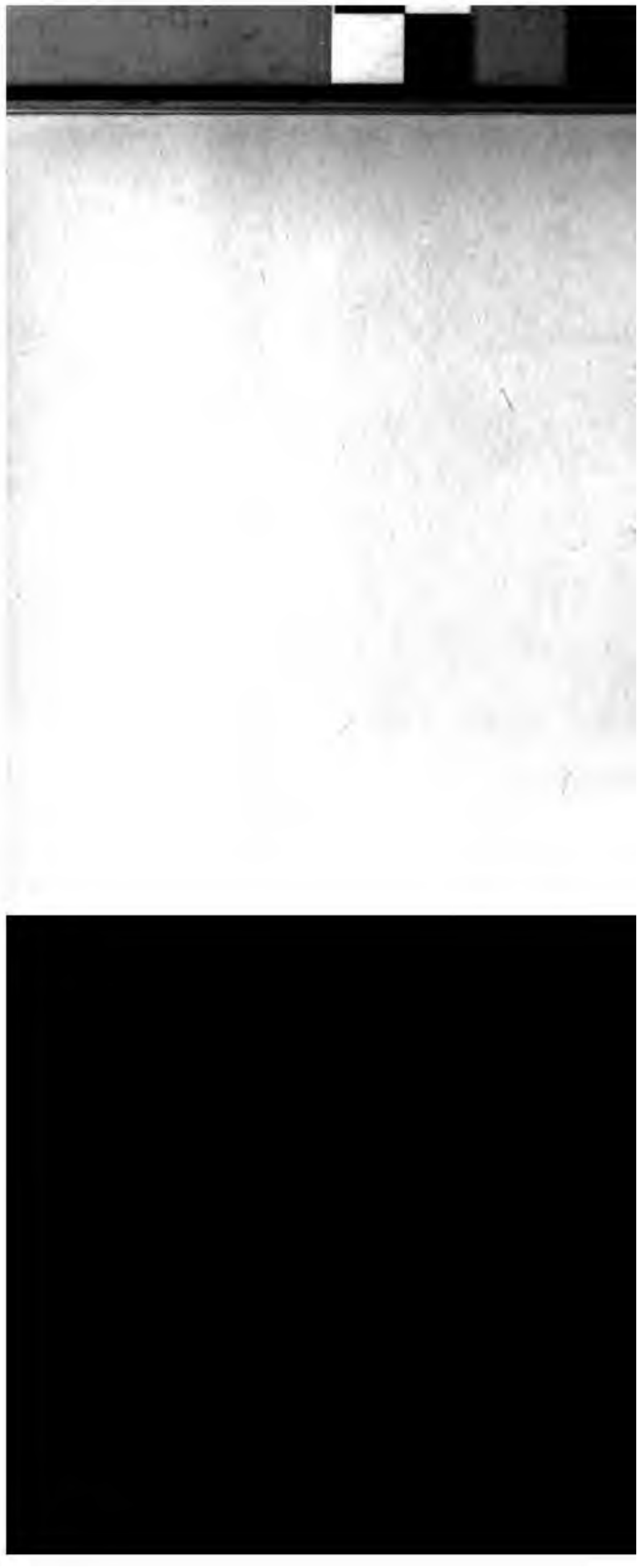


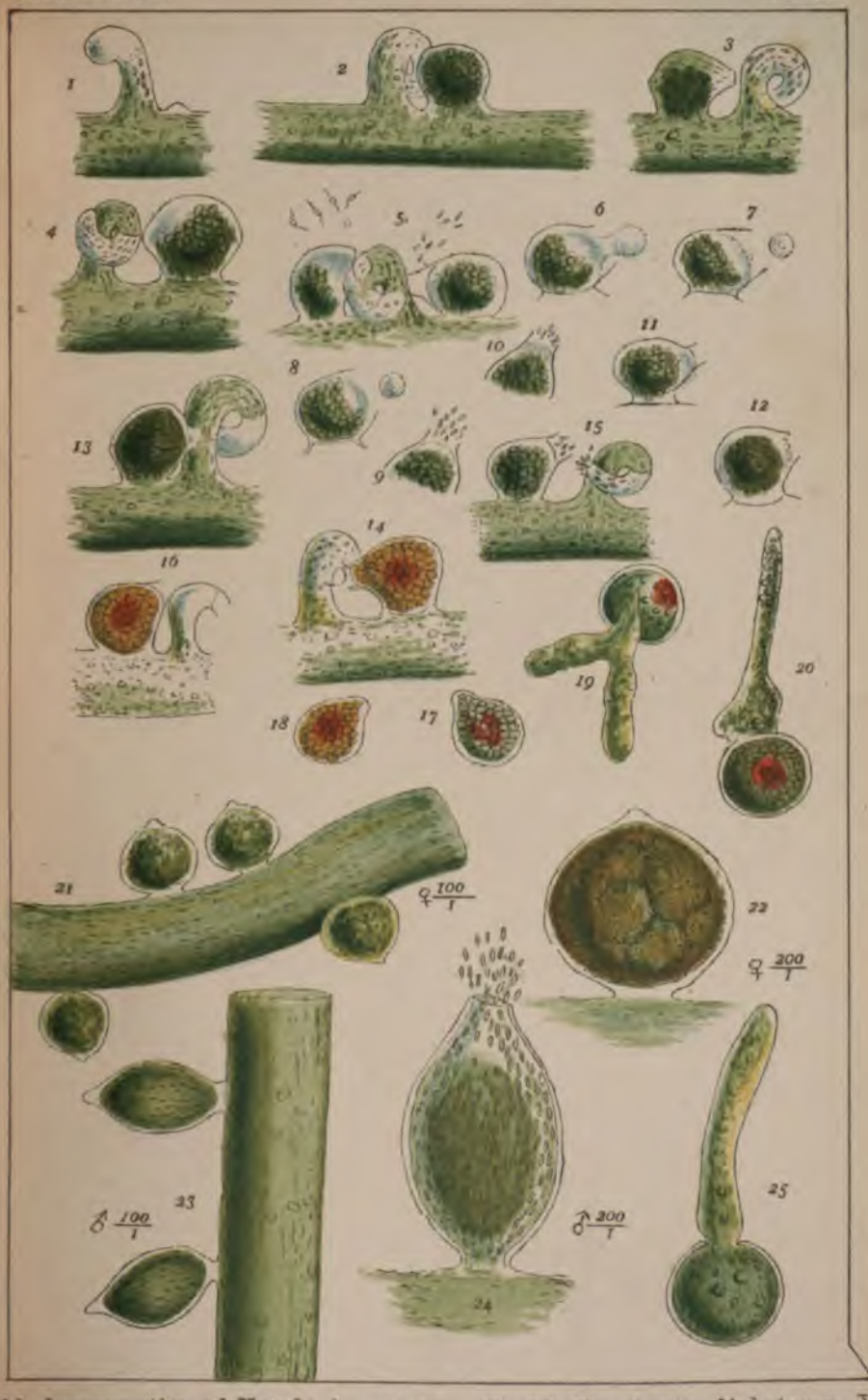




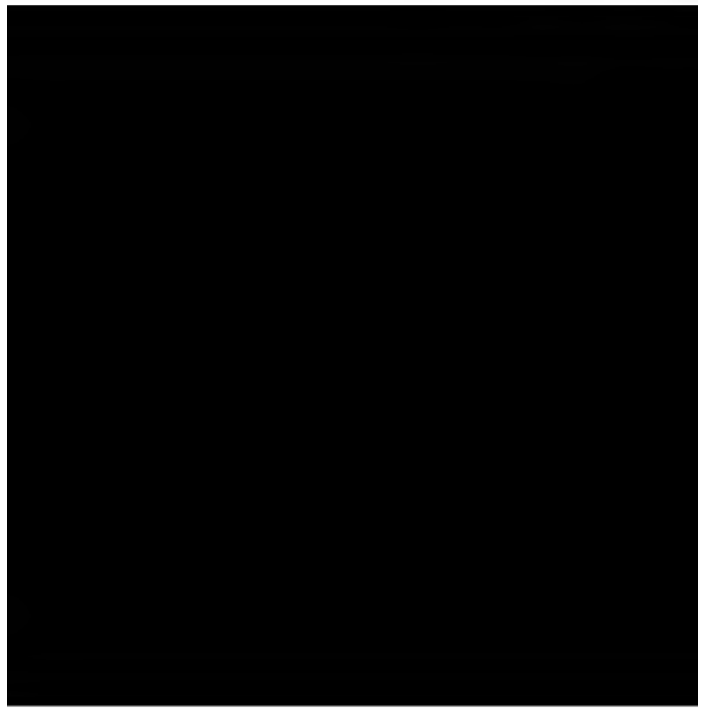
Botrydium granulatum, after Woronin.

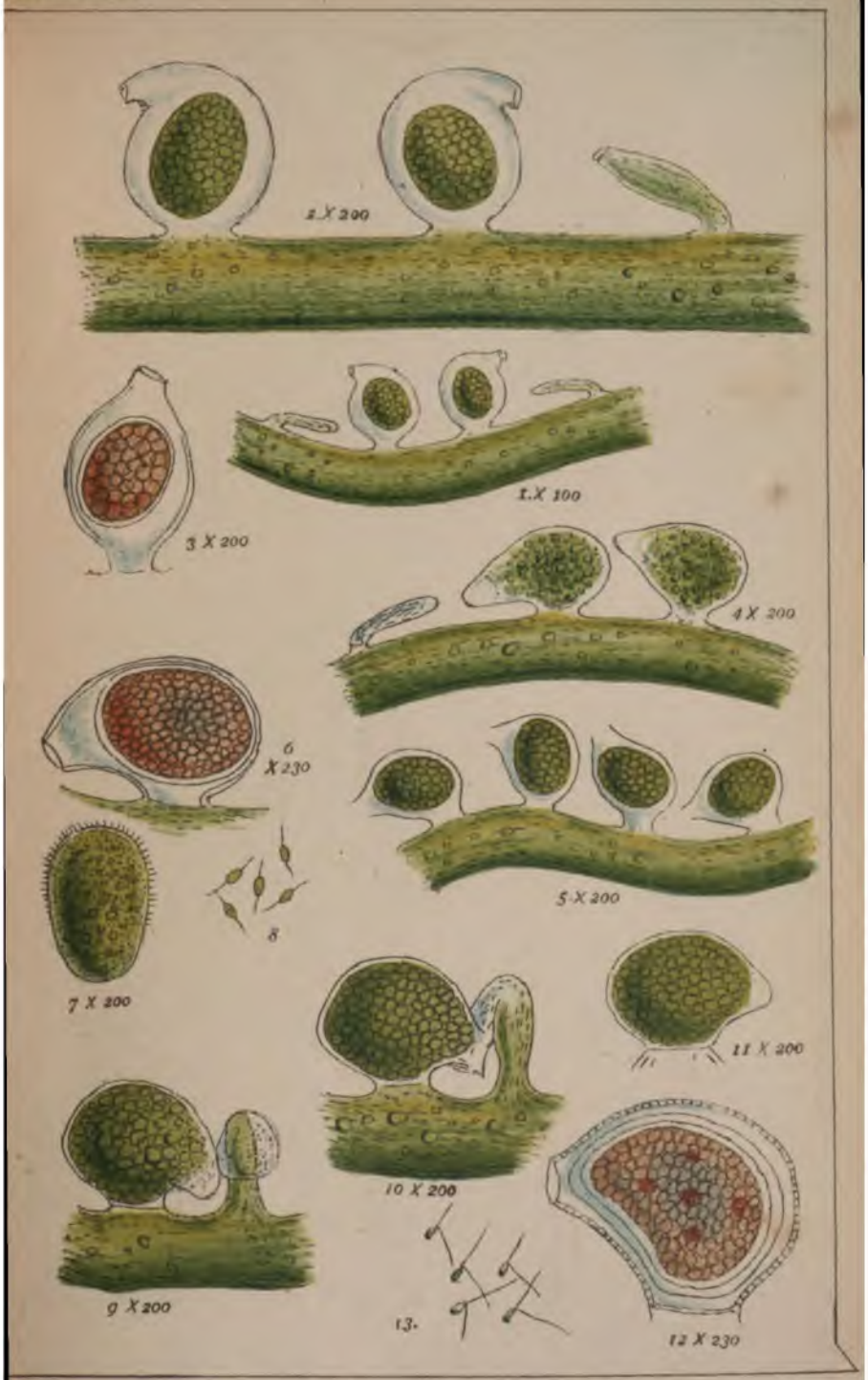




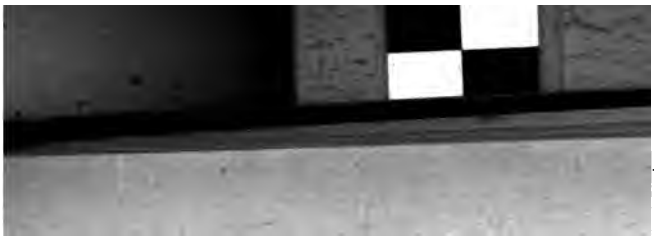


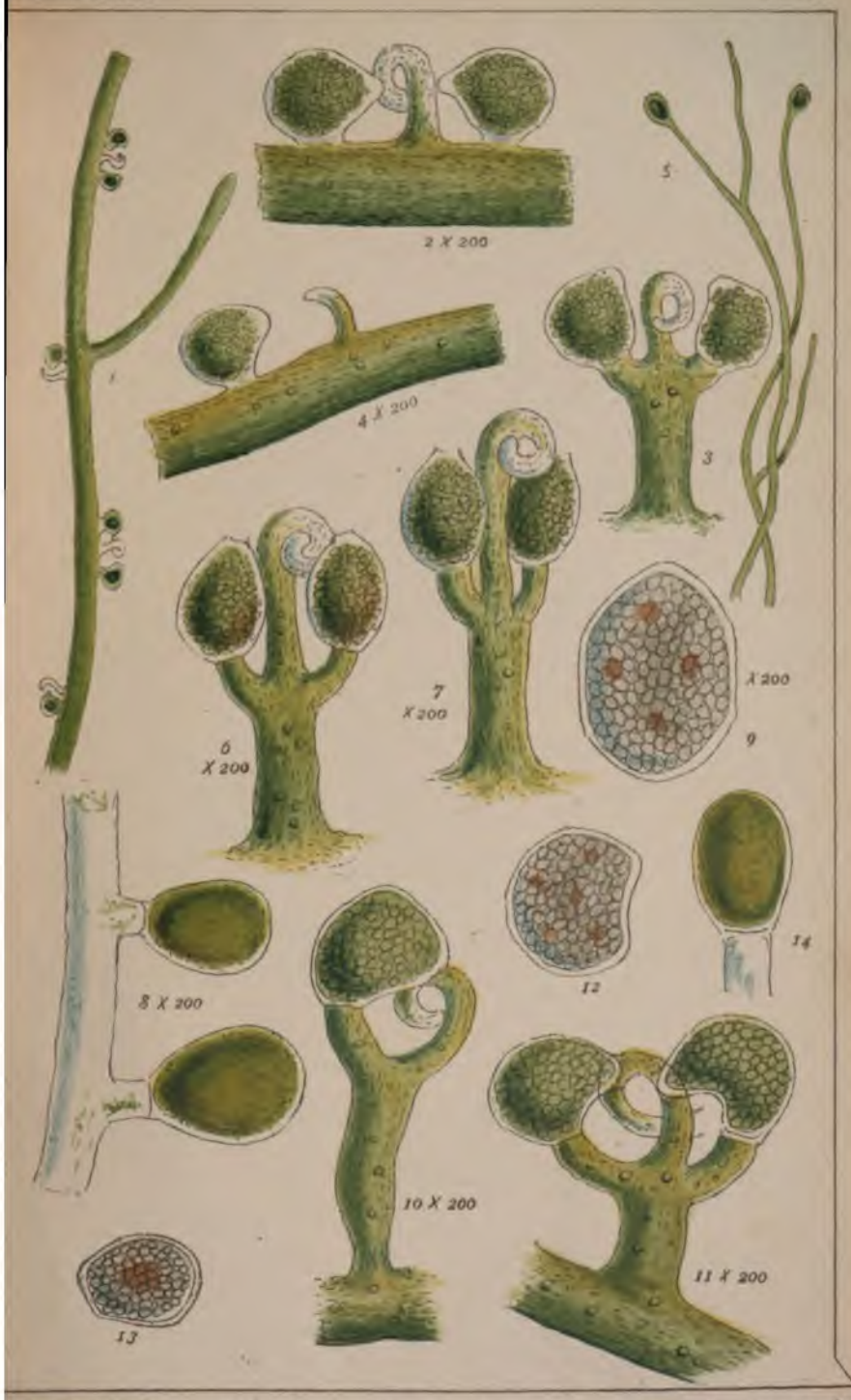
1.-20. *Impregnation of Vaucheria sessilis.* 21.-25. Vaucheria dichotoma. L



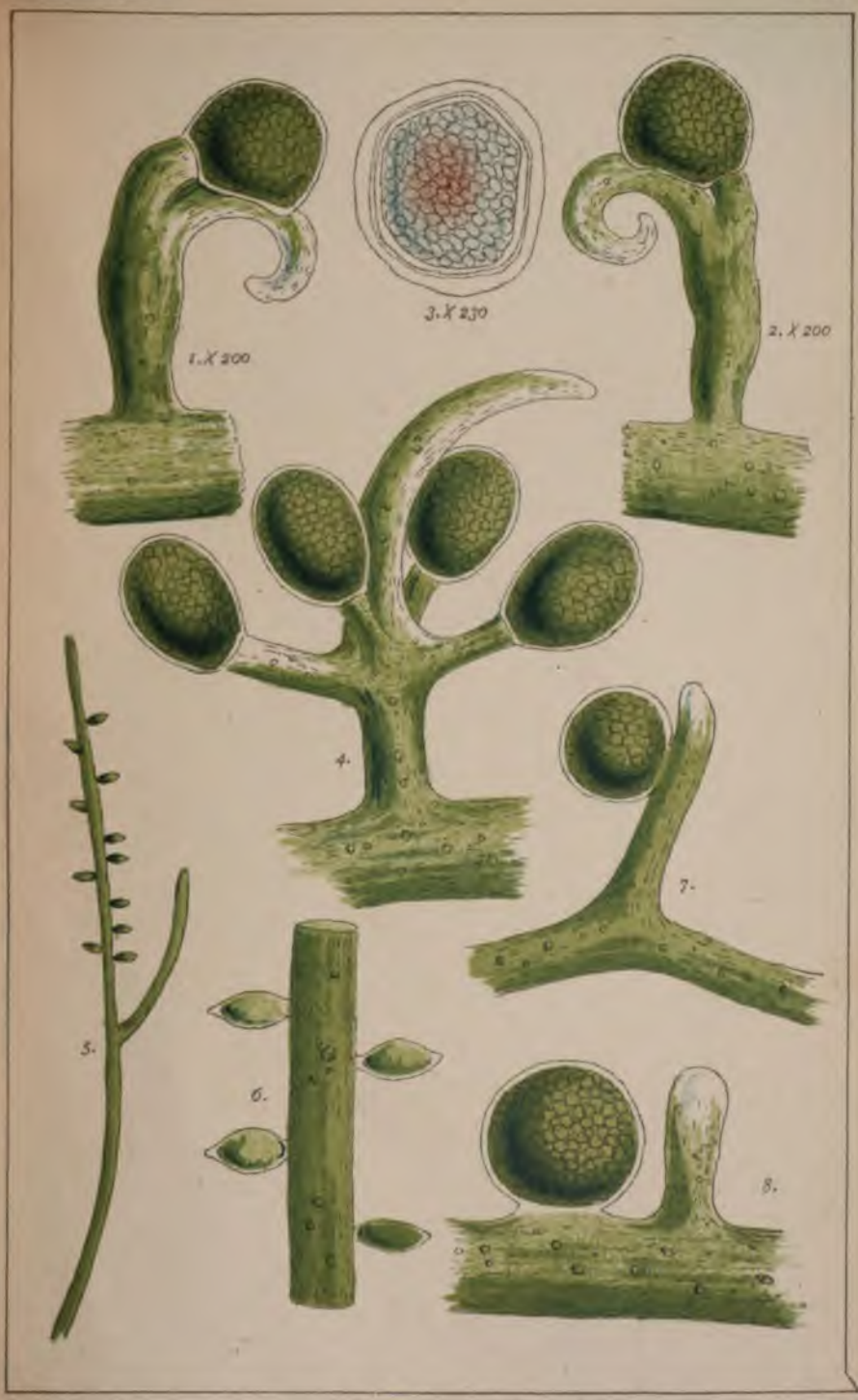


1-3 Vaucheria aversa. Hass. 4.-8. Vaucheria sericea. Lyngb.
9.-13. Vaucheria Dillwynii Ag.





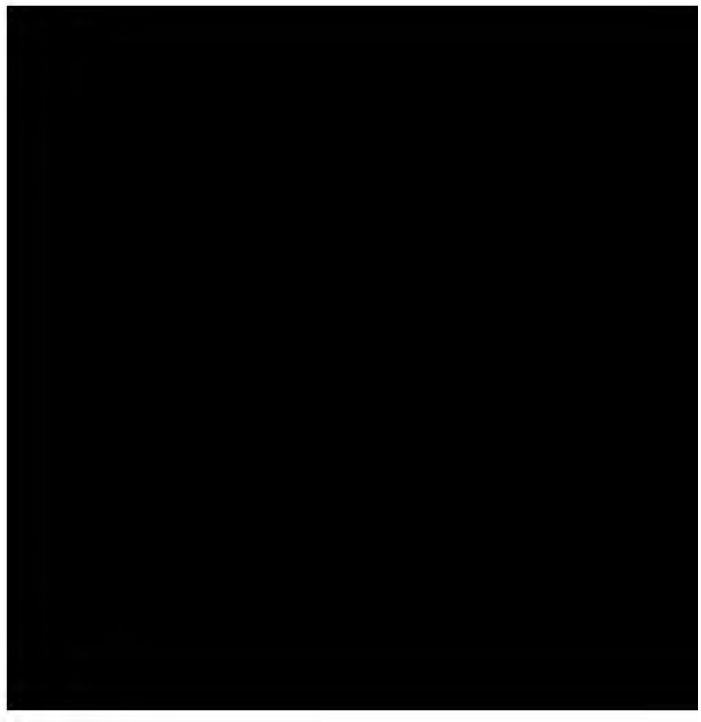
-2. *Vaucheria sessilis. Vauch.* 3. cæspitosa. 4. repens. 5. sporangium
-9. *Vaucheria geminata. D.C.* 10.-14. Vaucheria hamata. Ly

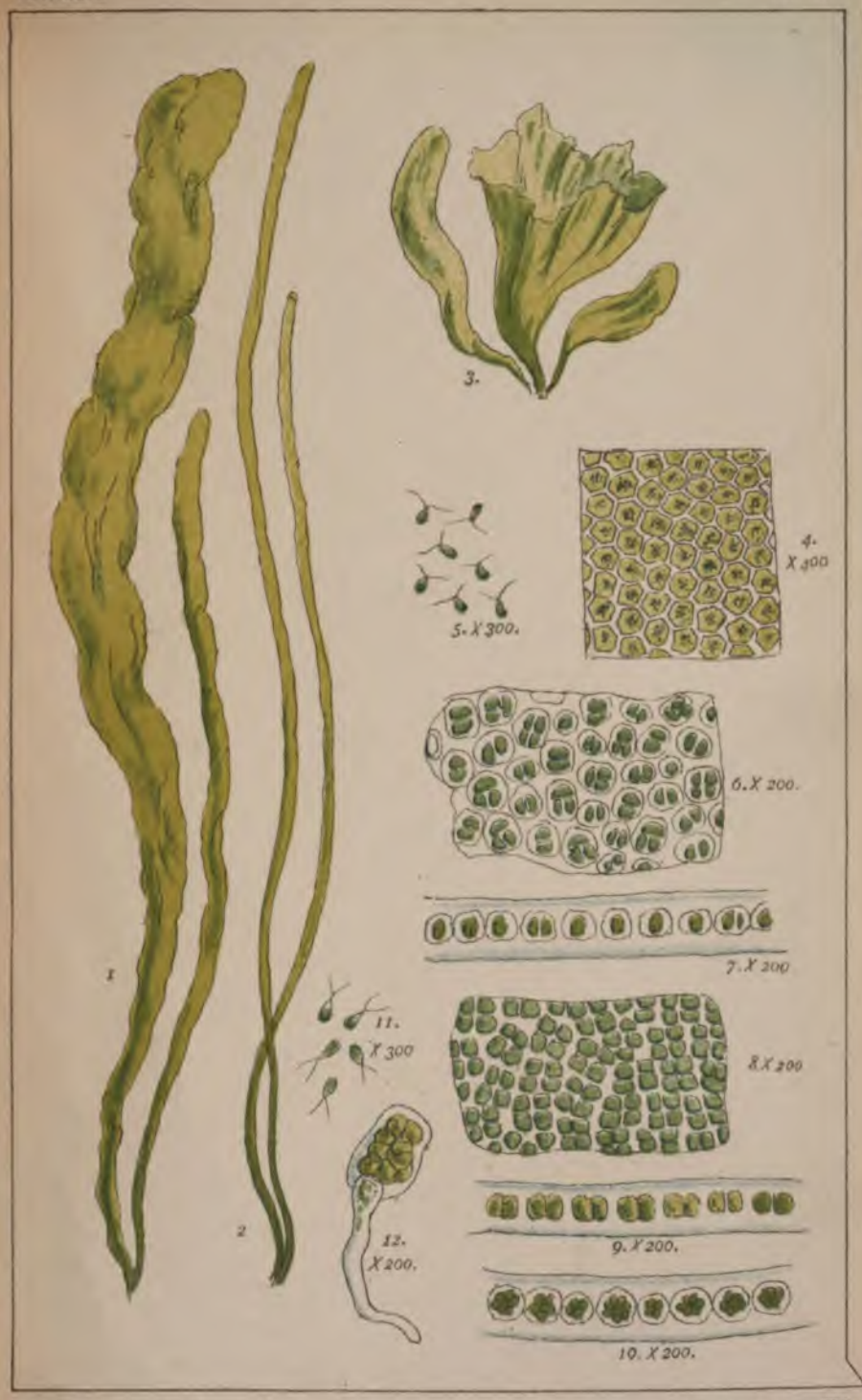


1.-3 *Vaucheria terrestris. Lyngb.* 4. Vaucheria racemosa. Hass.
5.-6. *Vaucheria submarina. Berk.* 7. Vaucheria velutina. Ag.

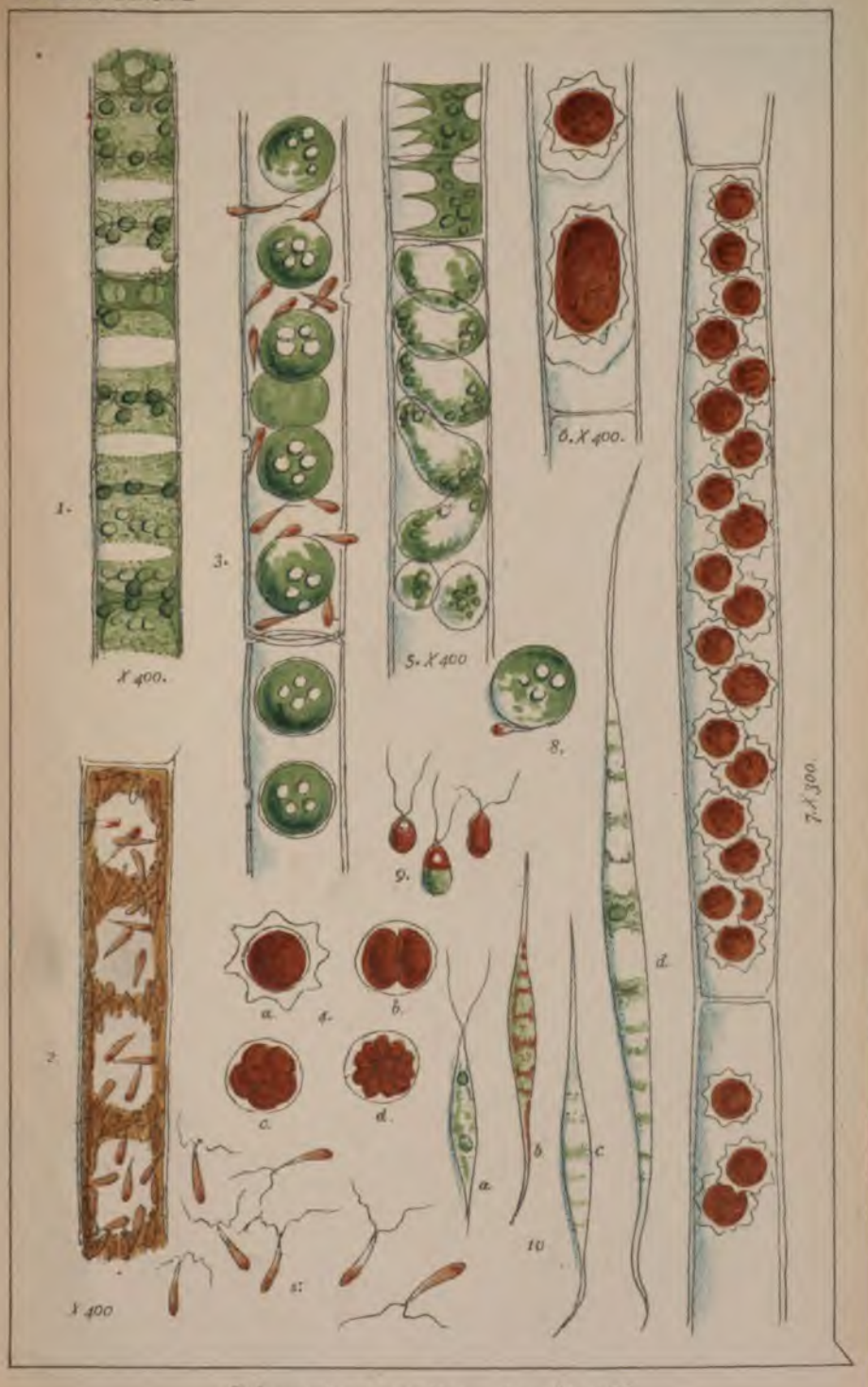
[redacted]

1.-2. *Prasiola crispa. Ktz.* 3.-4. Prasiola calophylla. Carm.
5.-7. *Prasiola furfuracea. Men.* 8.-11. Prasiola stipitata. Suhr.

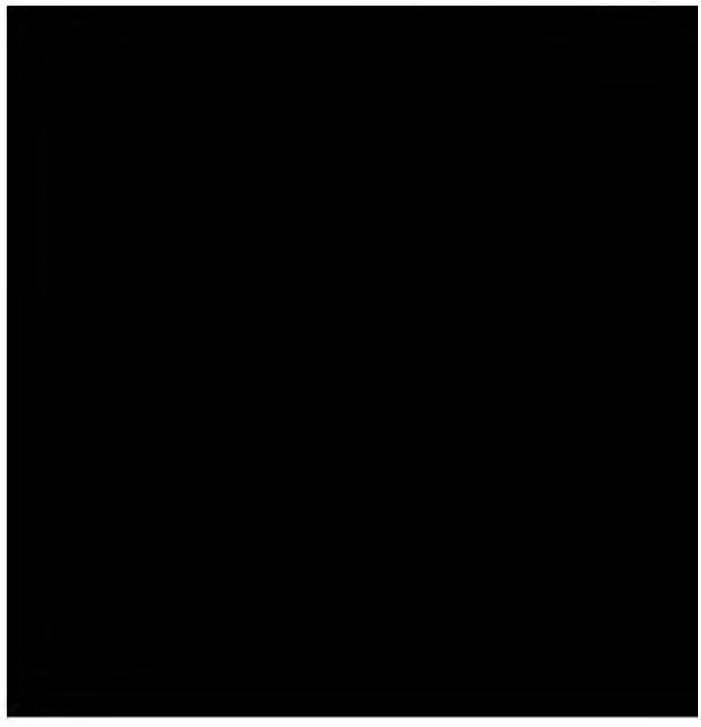


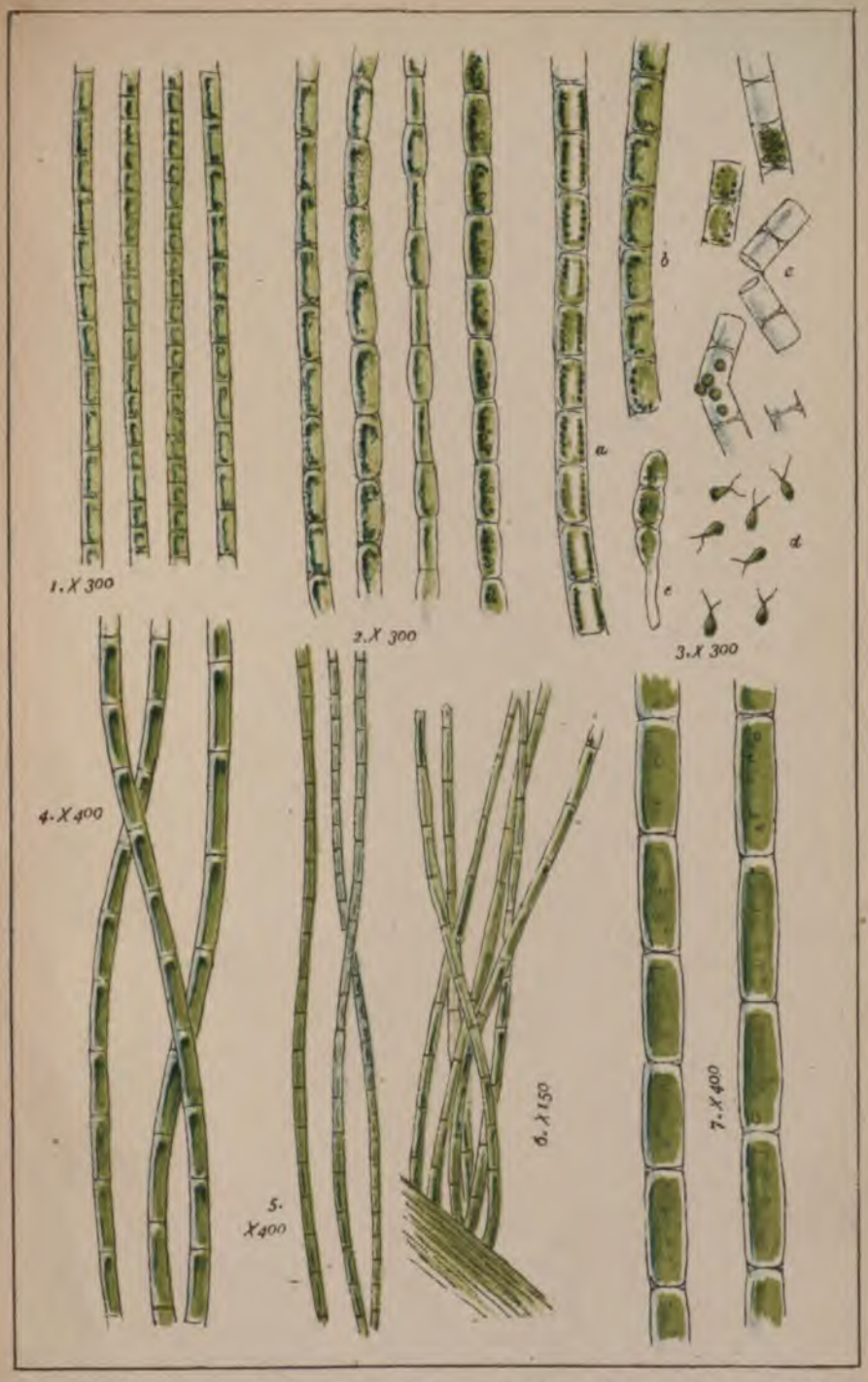


1.-5. *Enteromorpha intestinalis*. L. 6.-7. Monostroma laceratum. Thur
8.-12. *Monostroma* Wittrockii. Born.

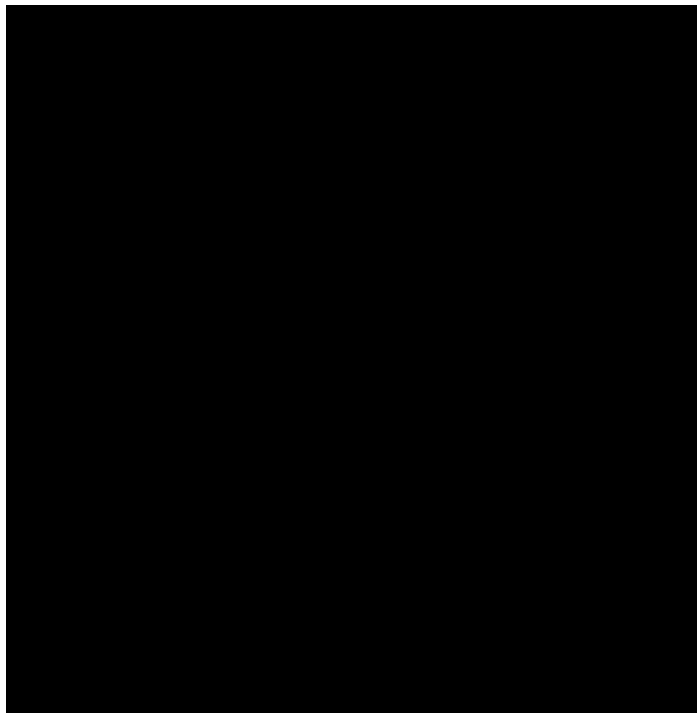


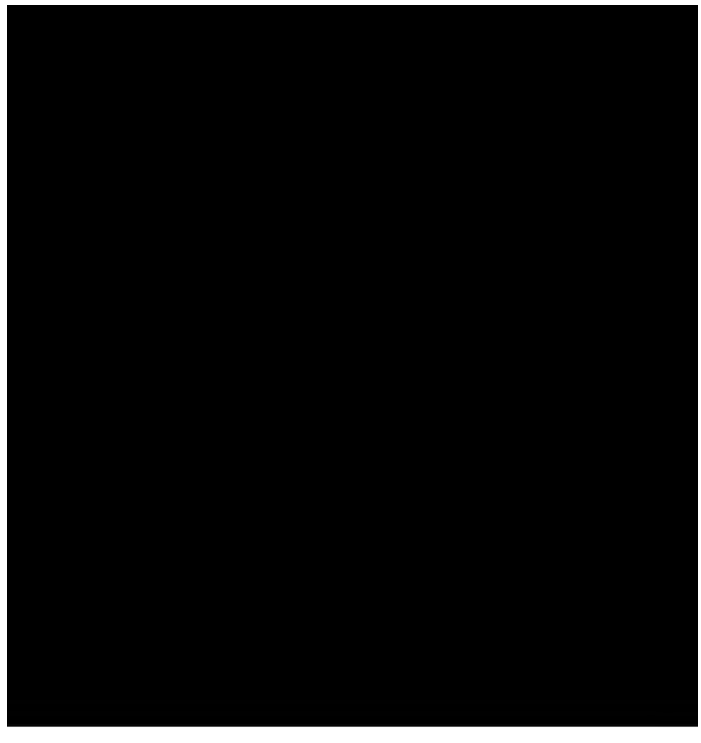
Sphæroplea annulina Ags. X 400.

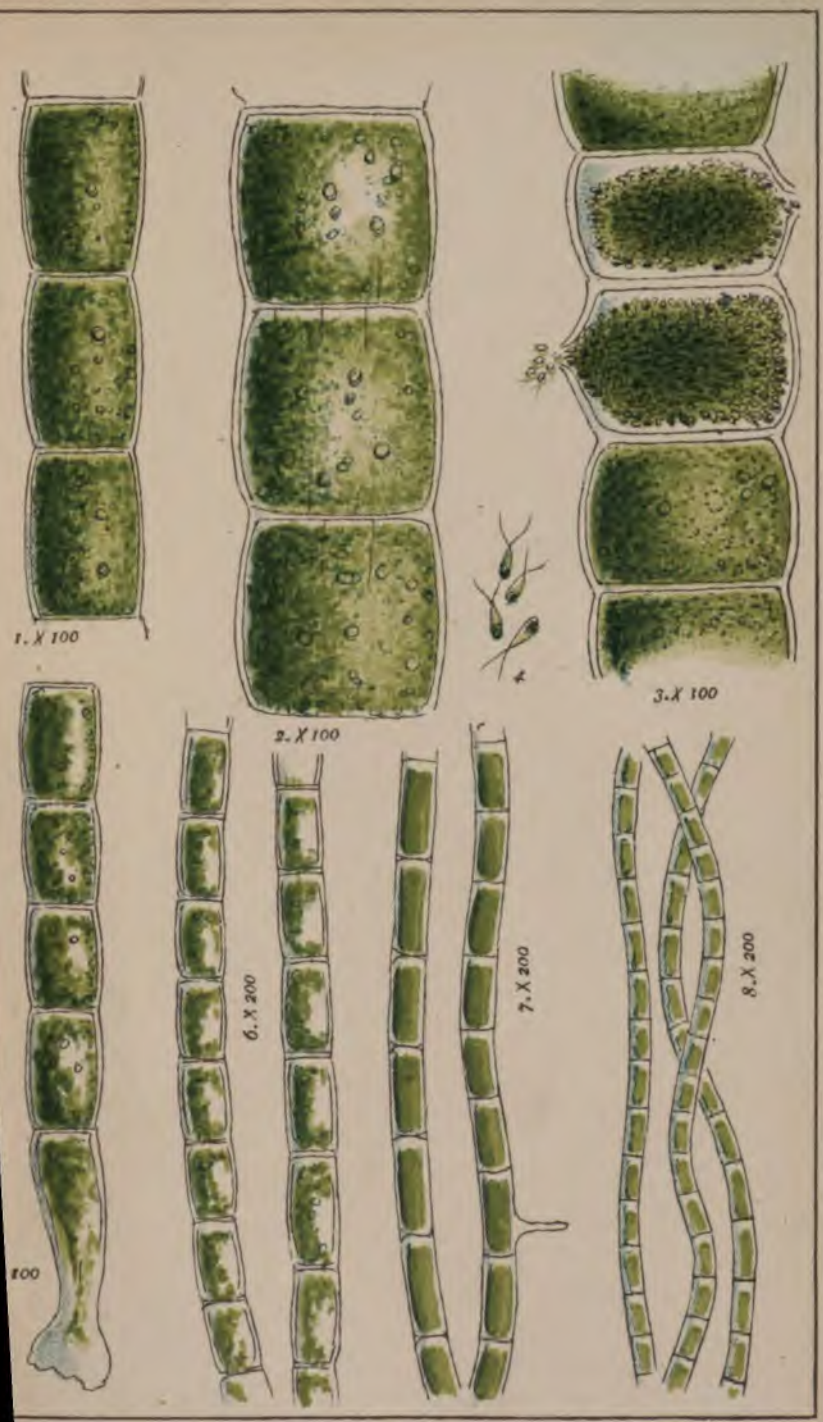




1. *Microspora fugacissima. Thur.* 2. *Microspora vulgaris. Rabh.*
3. *Microspora flocccosa. Thur.* 4. *Conferva bombycina. Ag*
5. *Conferva tenerrima. Kutz.* 6.-7. *Conferva fontinalis. Berk.*

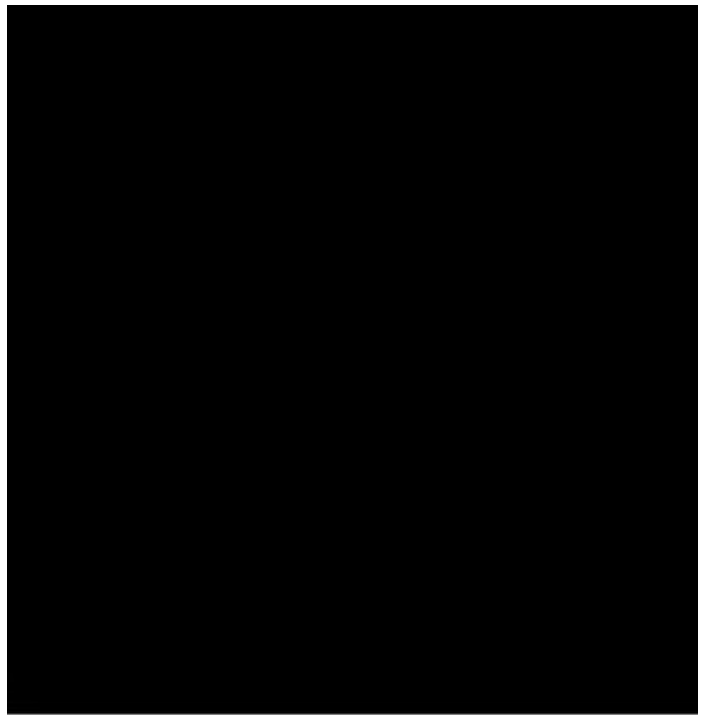


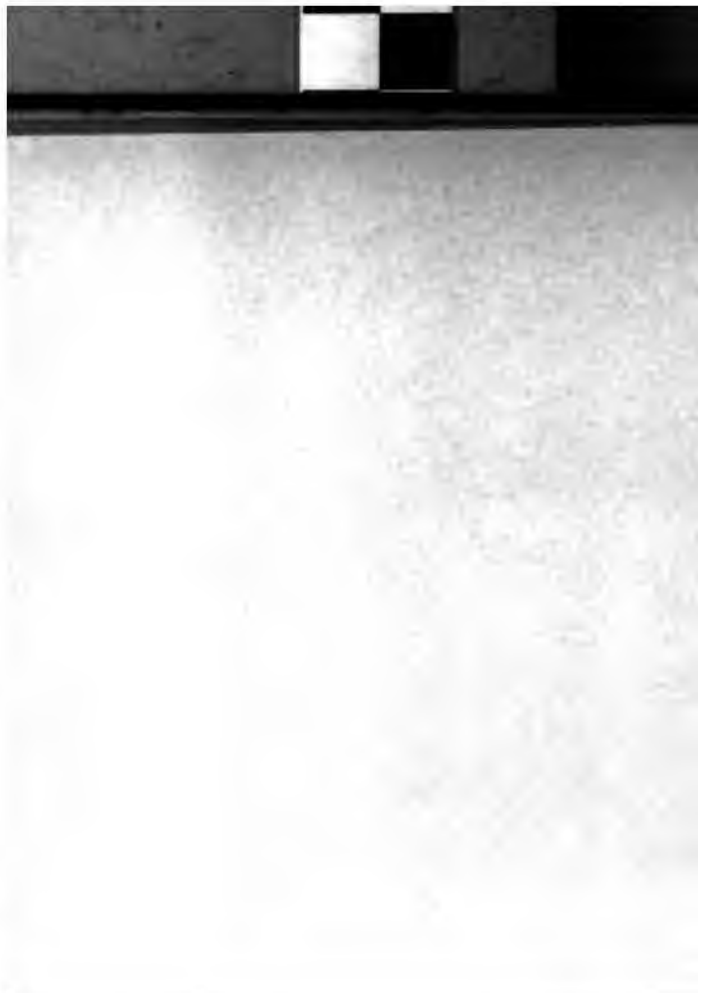


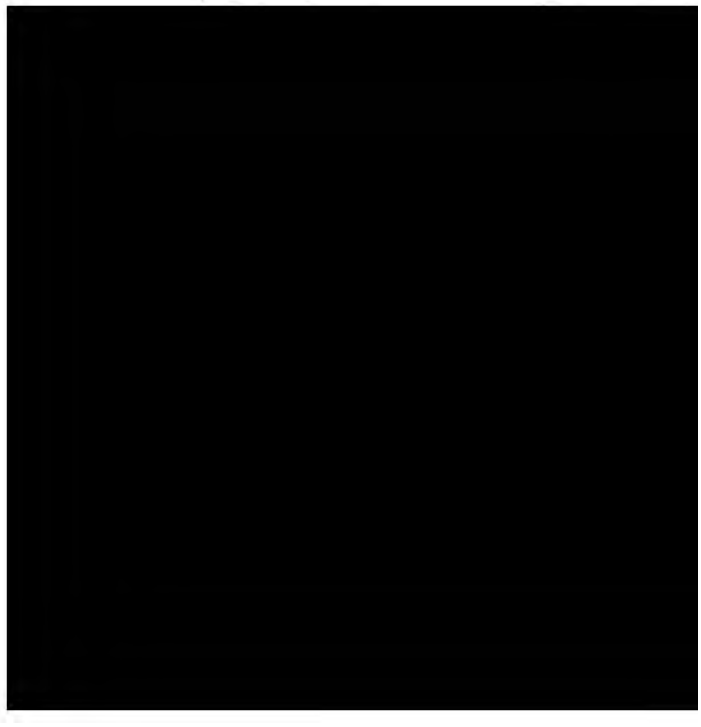


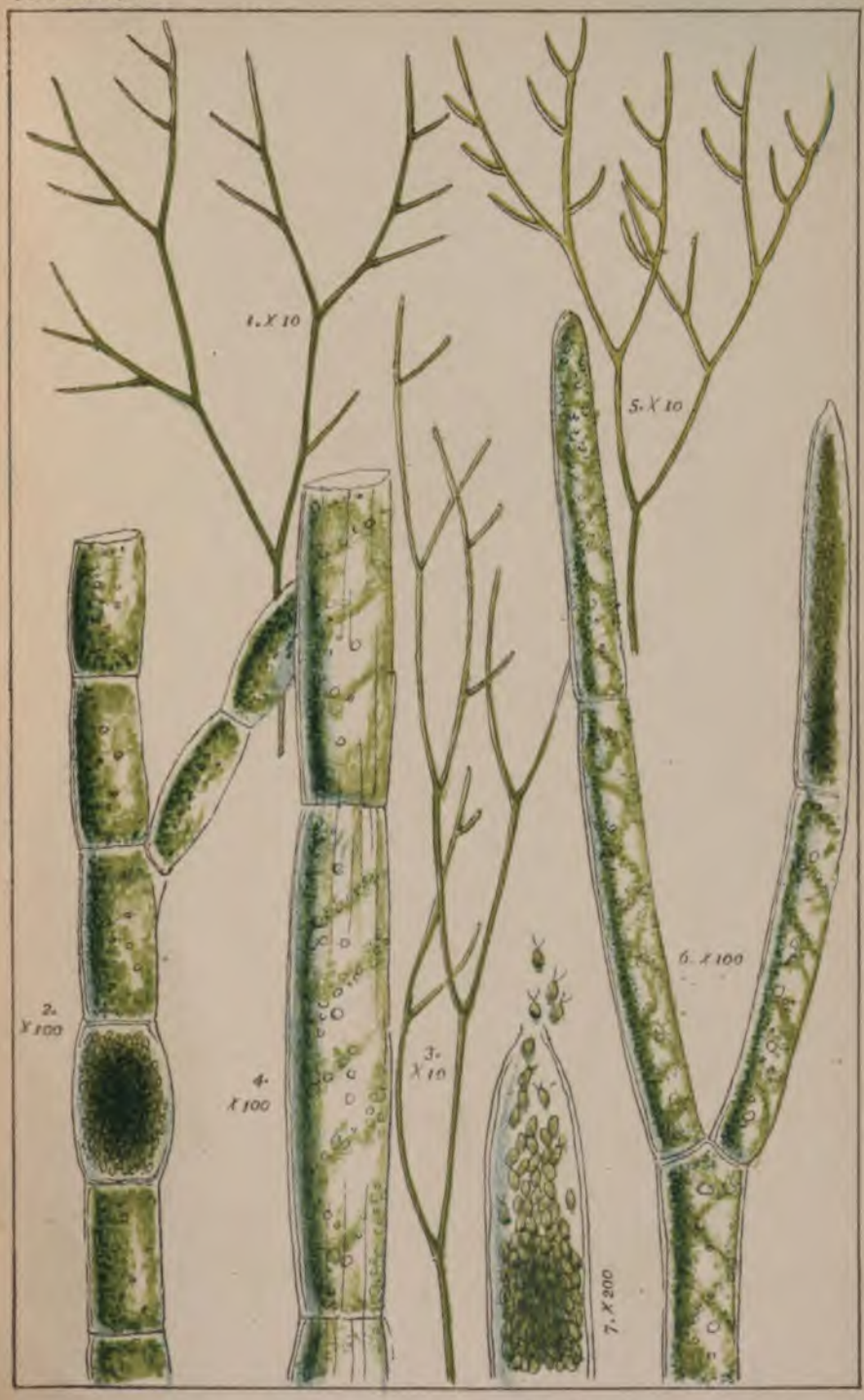
hætomorpha litorea. Harv.
etomorpha sutoria. Berk.
zoclonium Casparyi. Harv.

2.-4. Chætomorpha linum. K.
6. Chætomorpha implexa. Dillw.
8 Rhizoclonium flavicans. Jurg



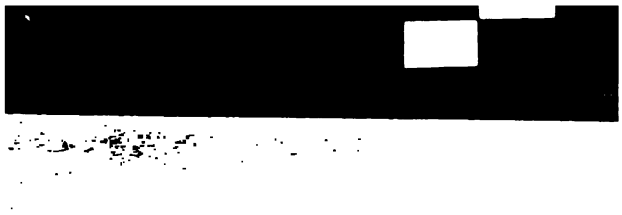


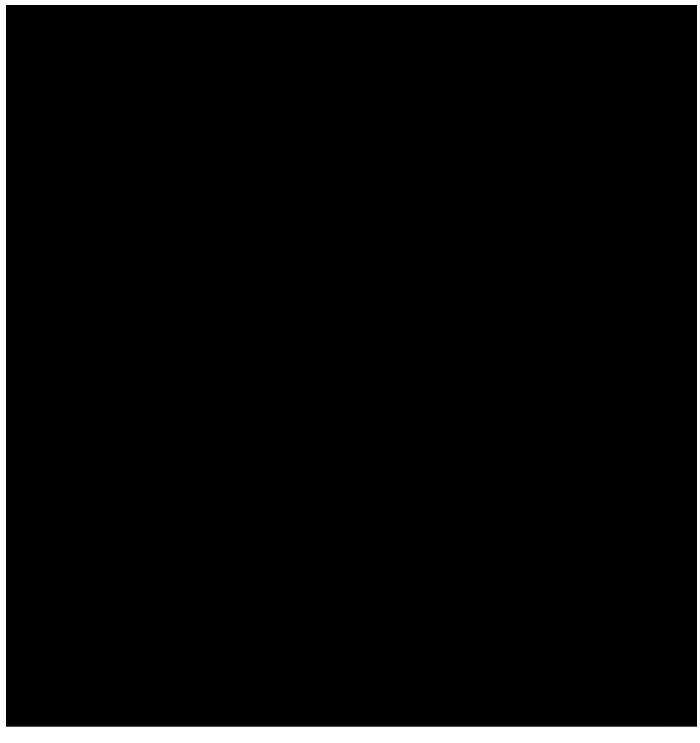


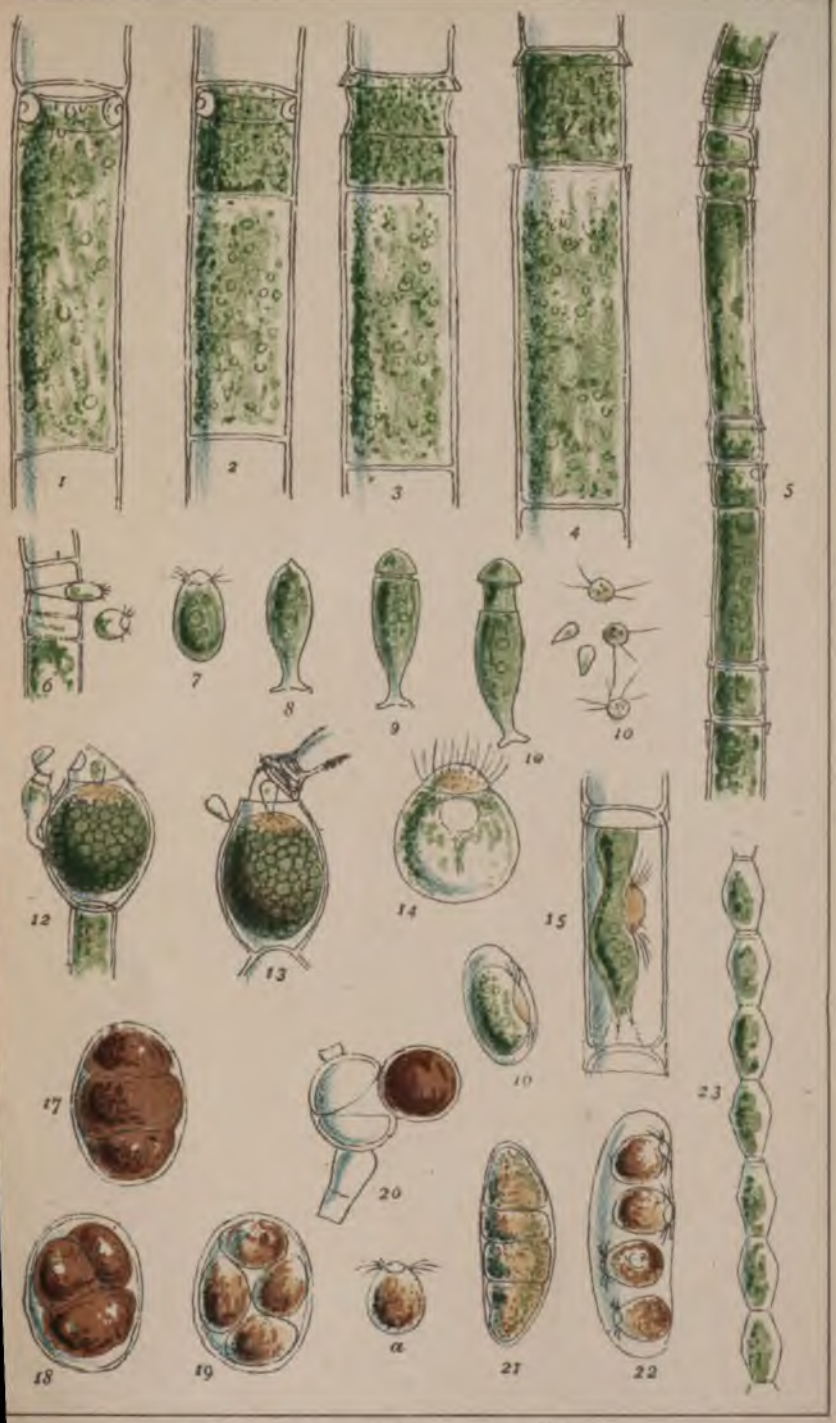


1.-2. *Cladophora fracta* K. 3.-4. *Cladophora crispata*. K.
5. 7. *Cladophora flavescens*. Ag

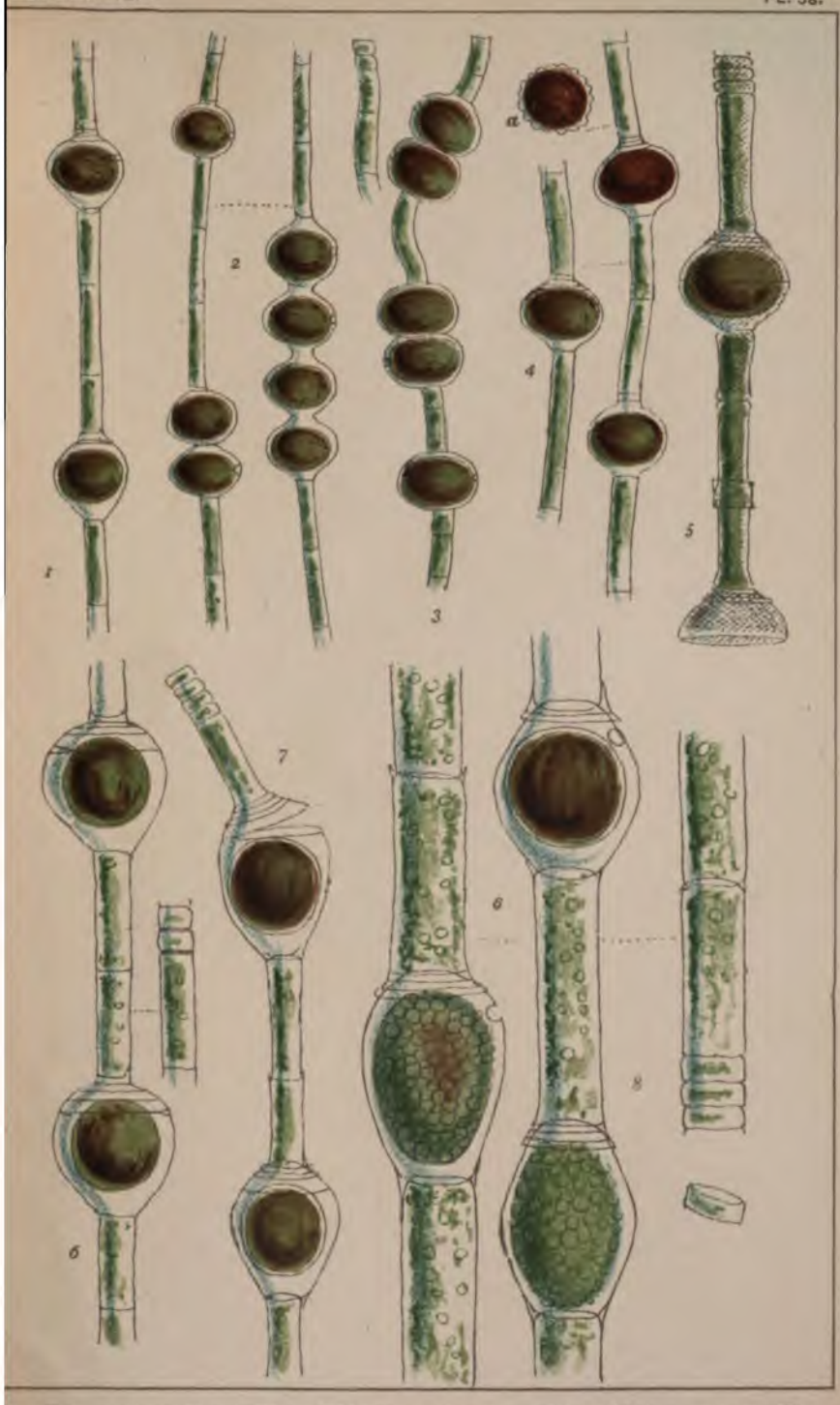
1.-4. *Cladophora glomerata. L.* 5. *Cladophora canalicularis. Kutz.*
6.-7. *Cladophora aegagropila. L.* 8.-11. *Pithophora kewensis. Wittr.*



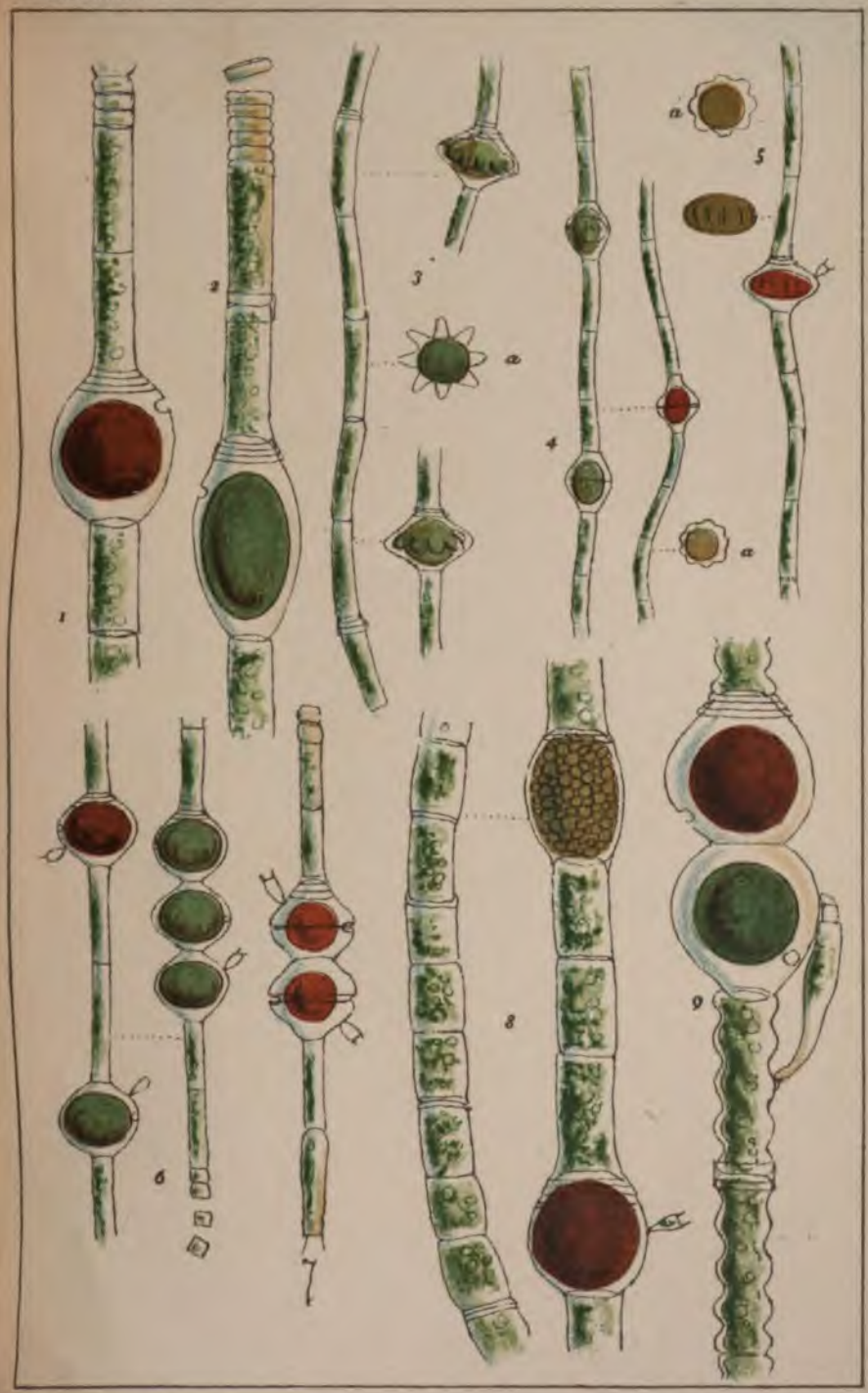




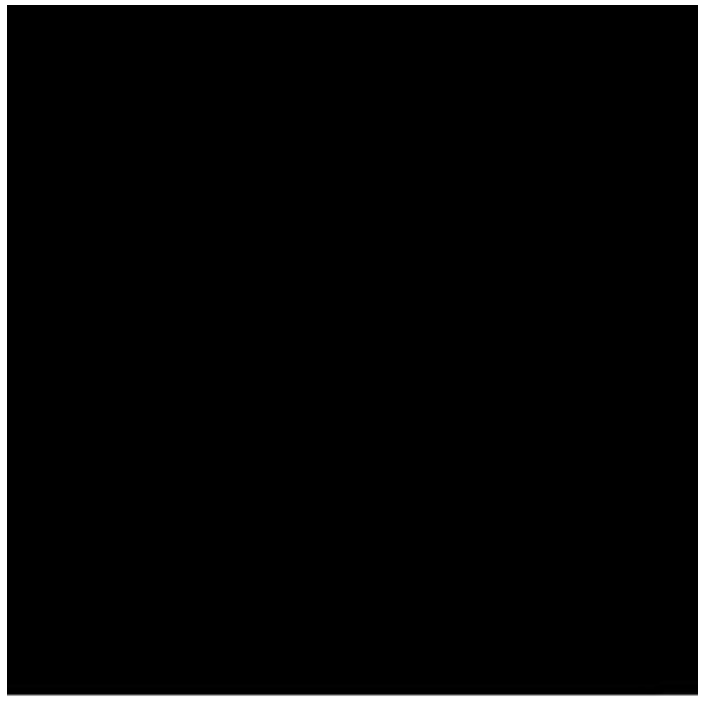
Œdogonium, and Bulbochæte. X 400.

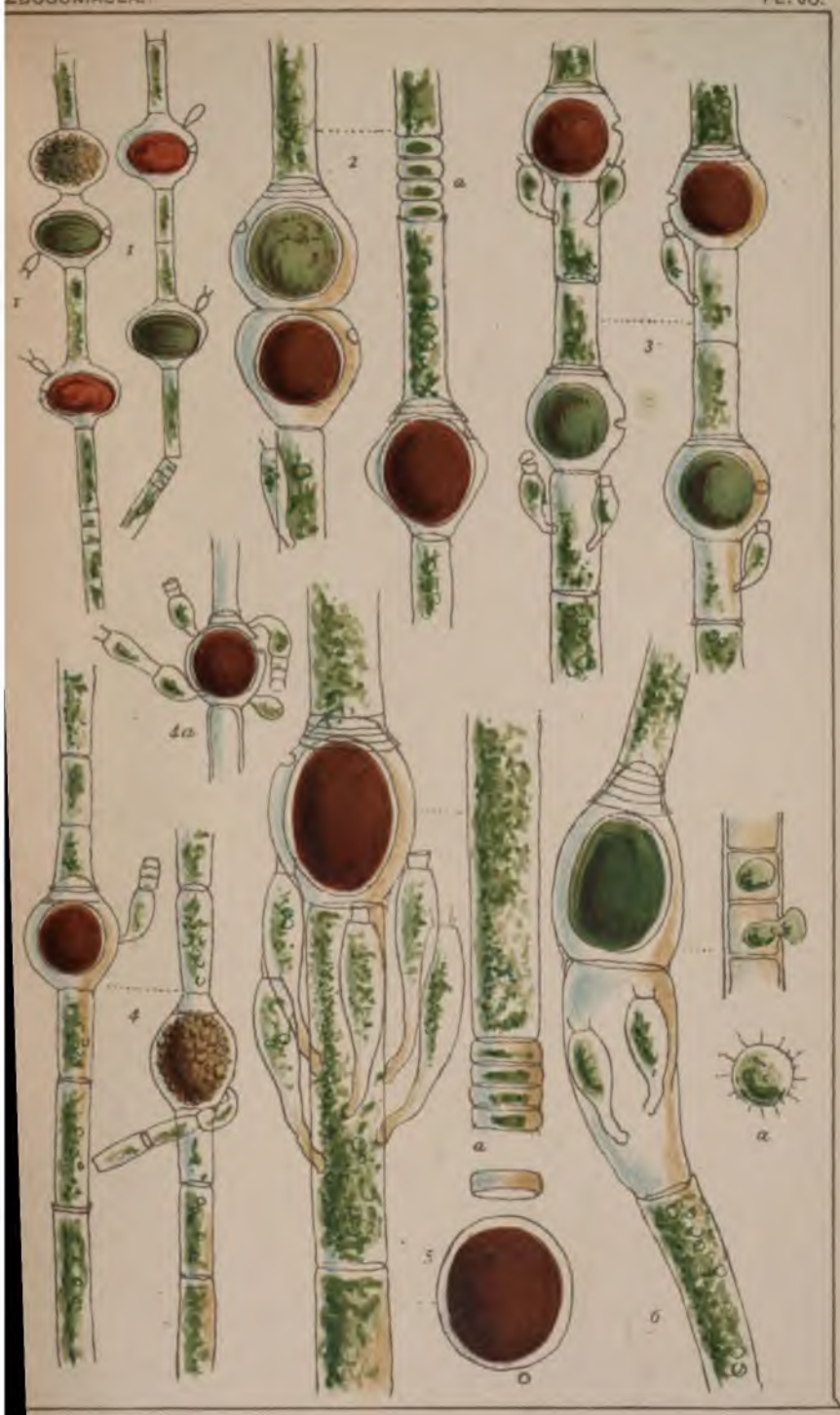


1. Œdogonium Petri. W. 2 Œdog. cryptoporum. W. 3 Œdog. curvum. Pr
4. Œdog. cymatosporum. W. 5. Œdog. minus W 6. Œdog. vernale. Hass
7. Œdog. crispum. Hass. 8. Œdog. Vaucherii. Br.

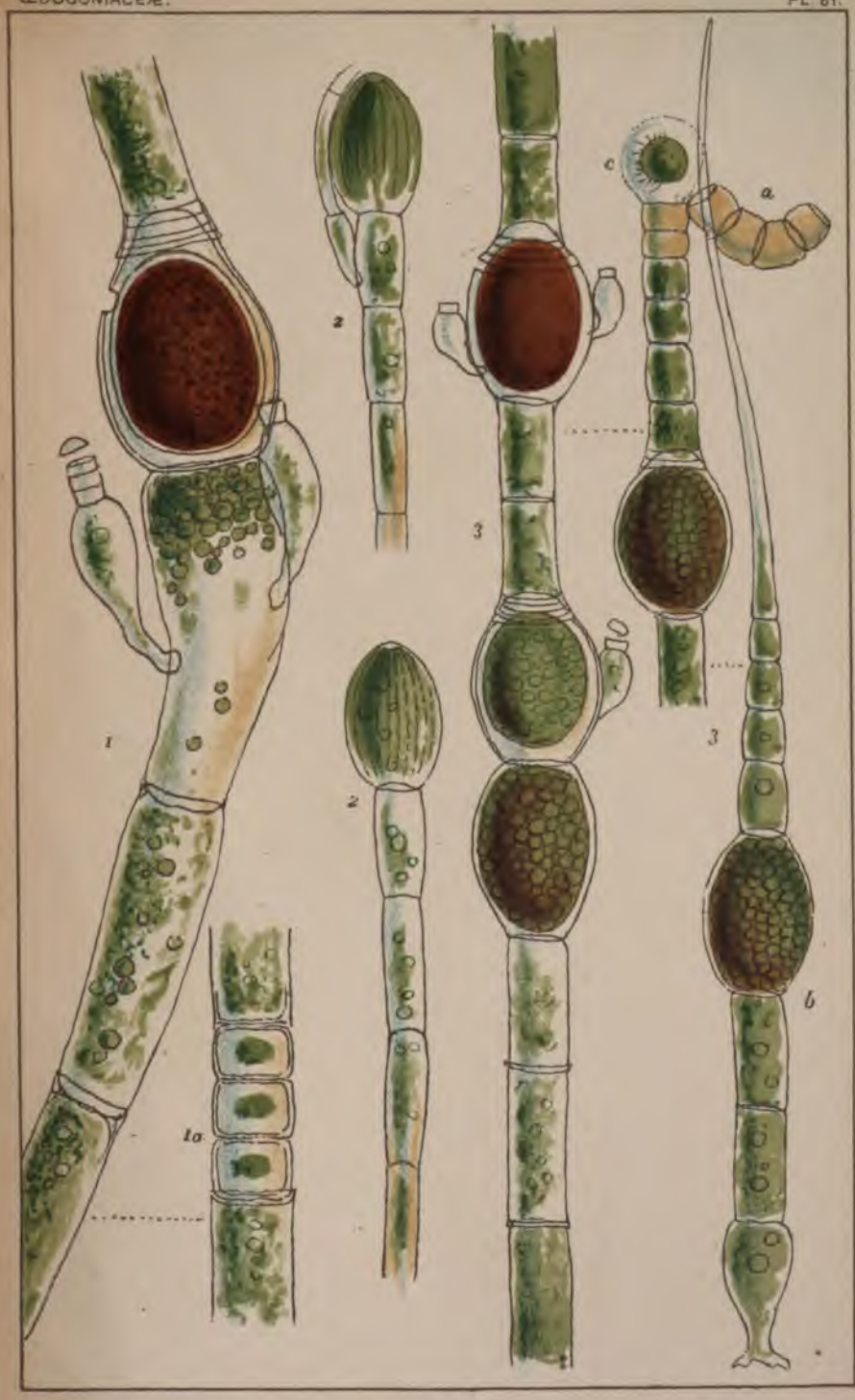


1. Œdog. urbicum W. 2. Œdog. paludosum. Hass. 3. Œdog. Itzigsohnii. (DBy
4. Œdog. excisum. W. 5. Œdog. platygynum. W. 6. Œdog. Rothii. Pr.
Œdog. Areschougii. W. 8. Œdog. pluviale. Nord. 9. Œdog. undulatum. Bre



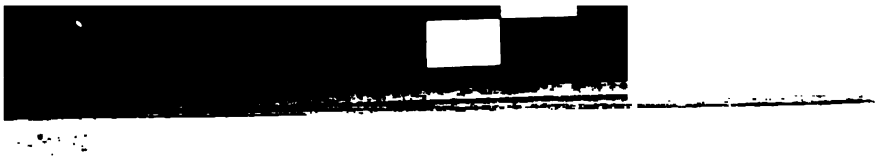


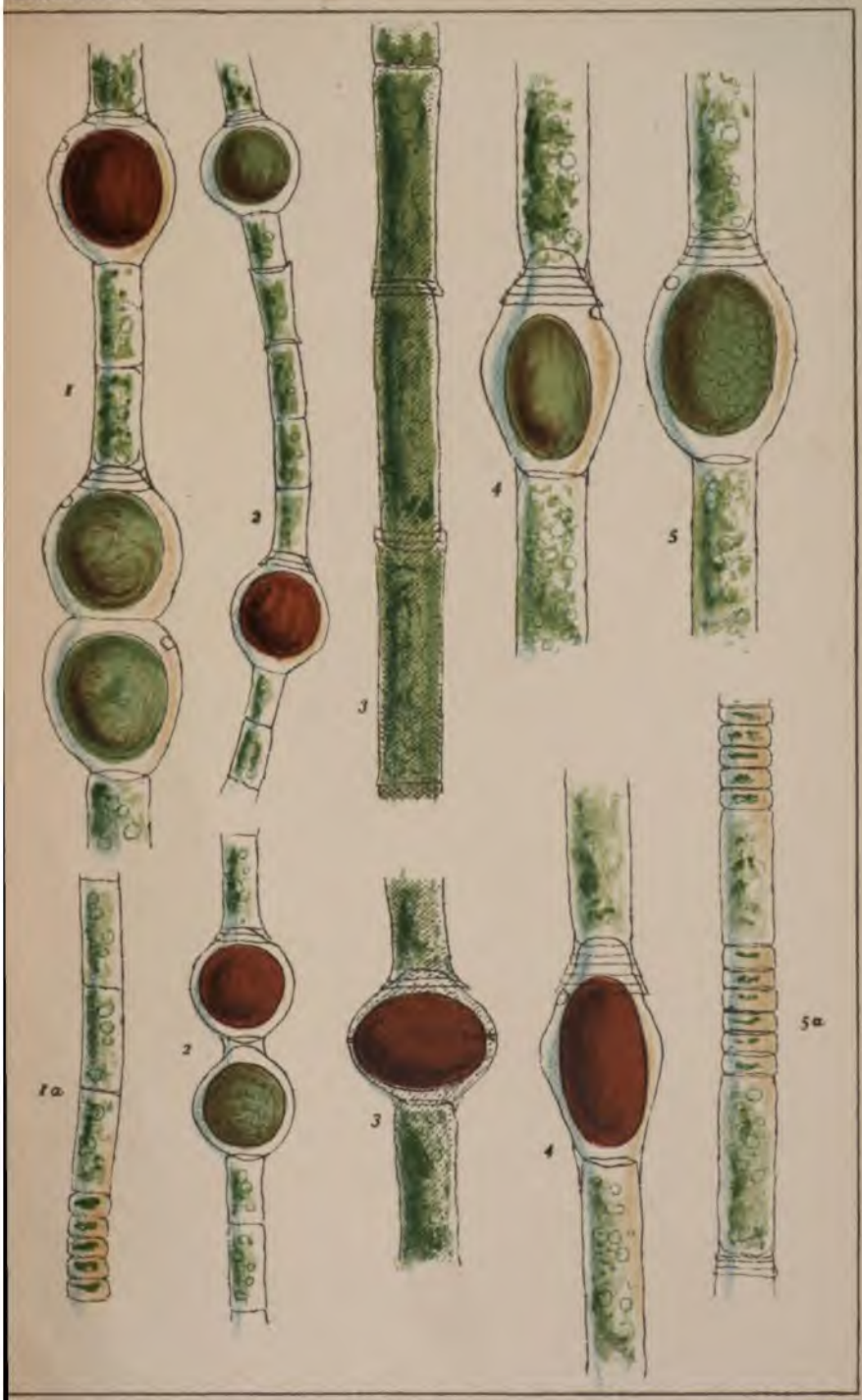
Œdog. depressum. Pr. 2. Œdog. flavescens. Hass. 3 Œdog. Braunii. Kue
og. macrandum. W. 5. Œdog. crassiusculum. W. 6. Œdog. Boristian



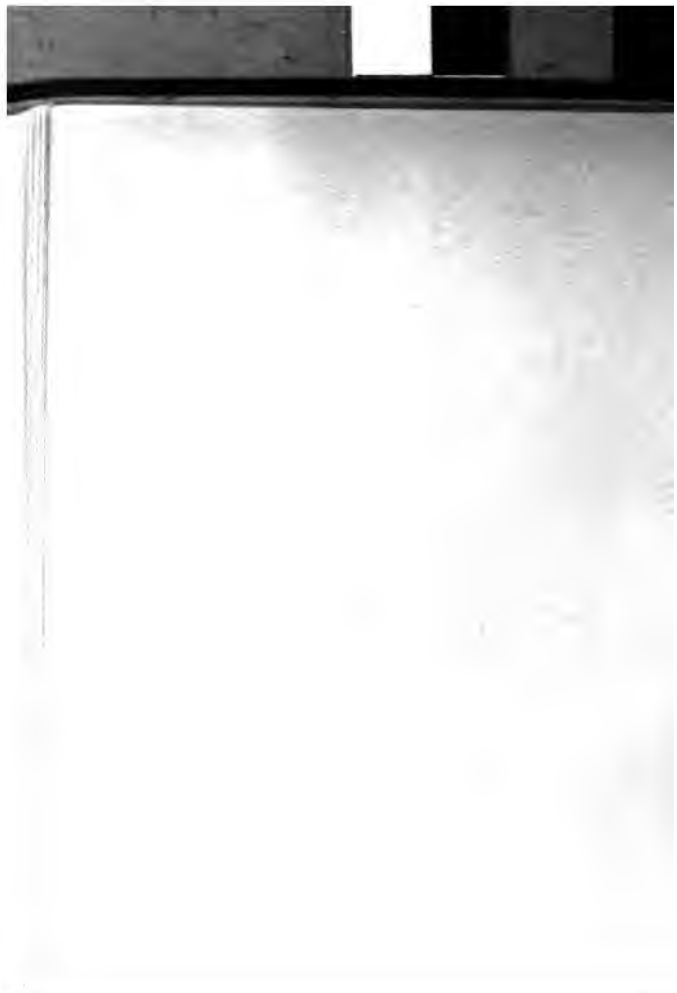
1. Œdog. concatenatum. Hass. 2 Œdog. acrosporum. D.By. 3. Œdog. ciliatum. (Pr.

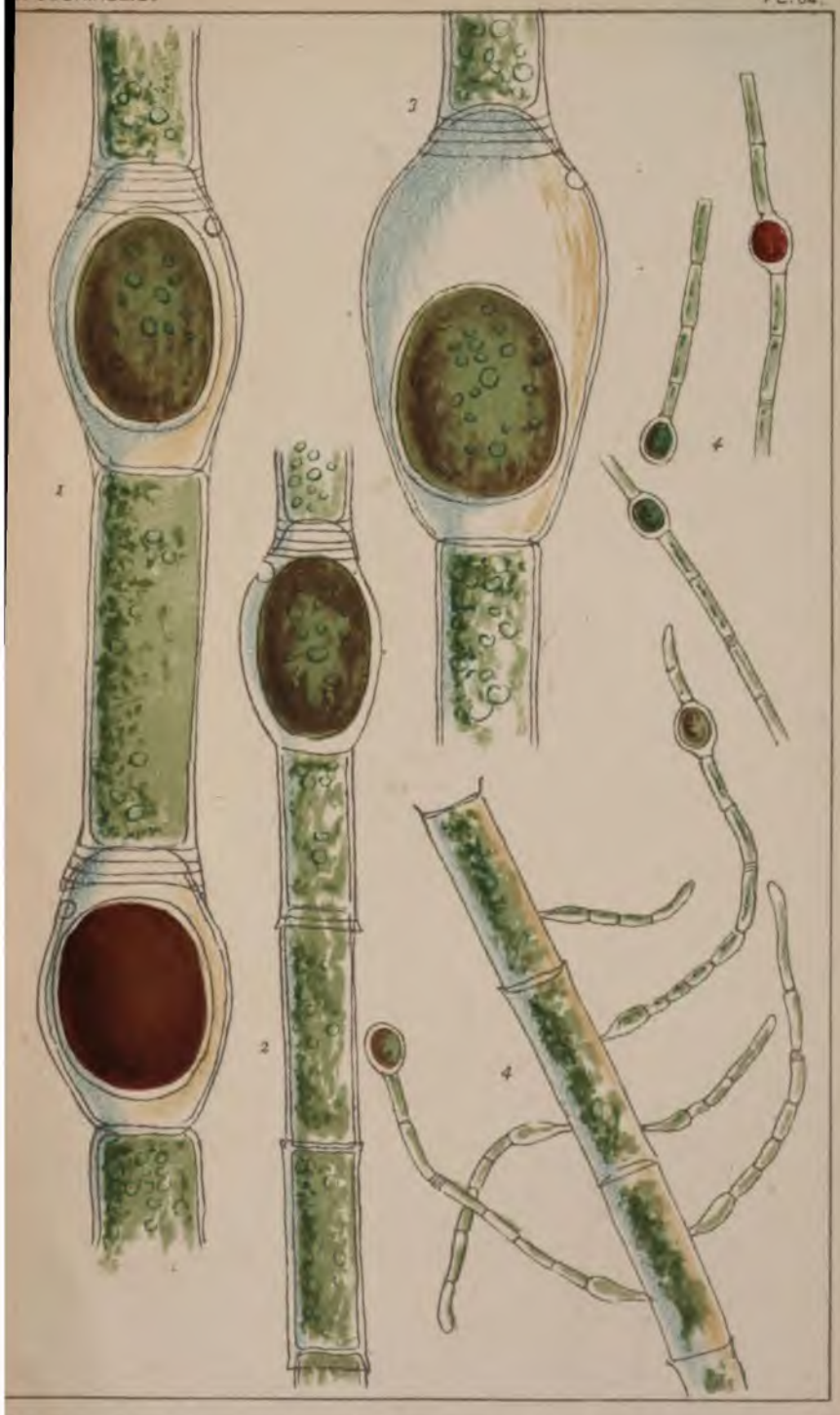
Œdog. Cleveanum W. 2 Œdog. echinospermum. Br. 3. Œdog. capillare (L.)
4. Œdog. calcareum. W. 5 Œdog. cardiacum. Hass.



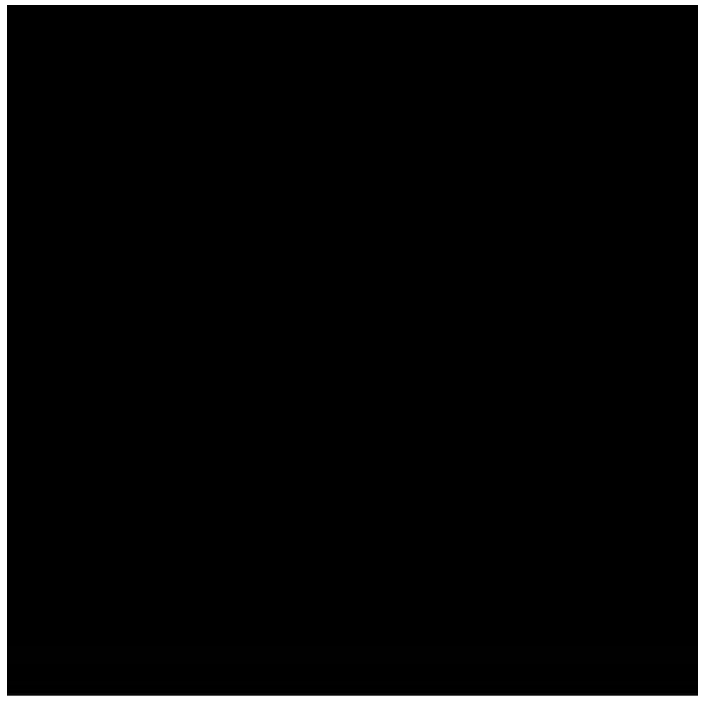


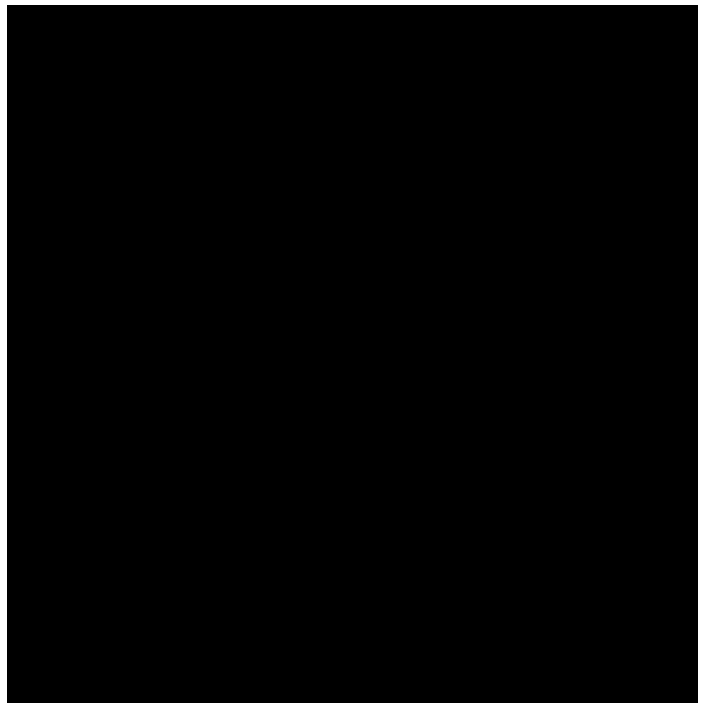
1. Œdog. carbonicum. W. 2. Œdog. Pringsheimii. W. 3. Œdog. punctato-striatum. DBy. 4 Œdog. Boscii. W. 5. Œdog. tumidulum. Kütz.

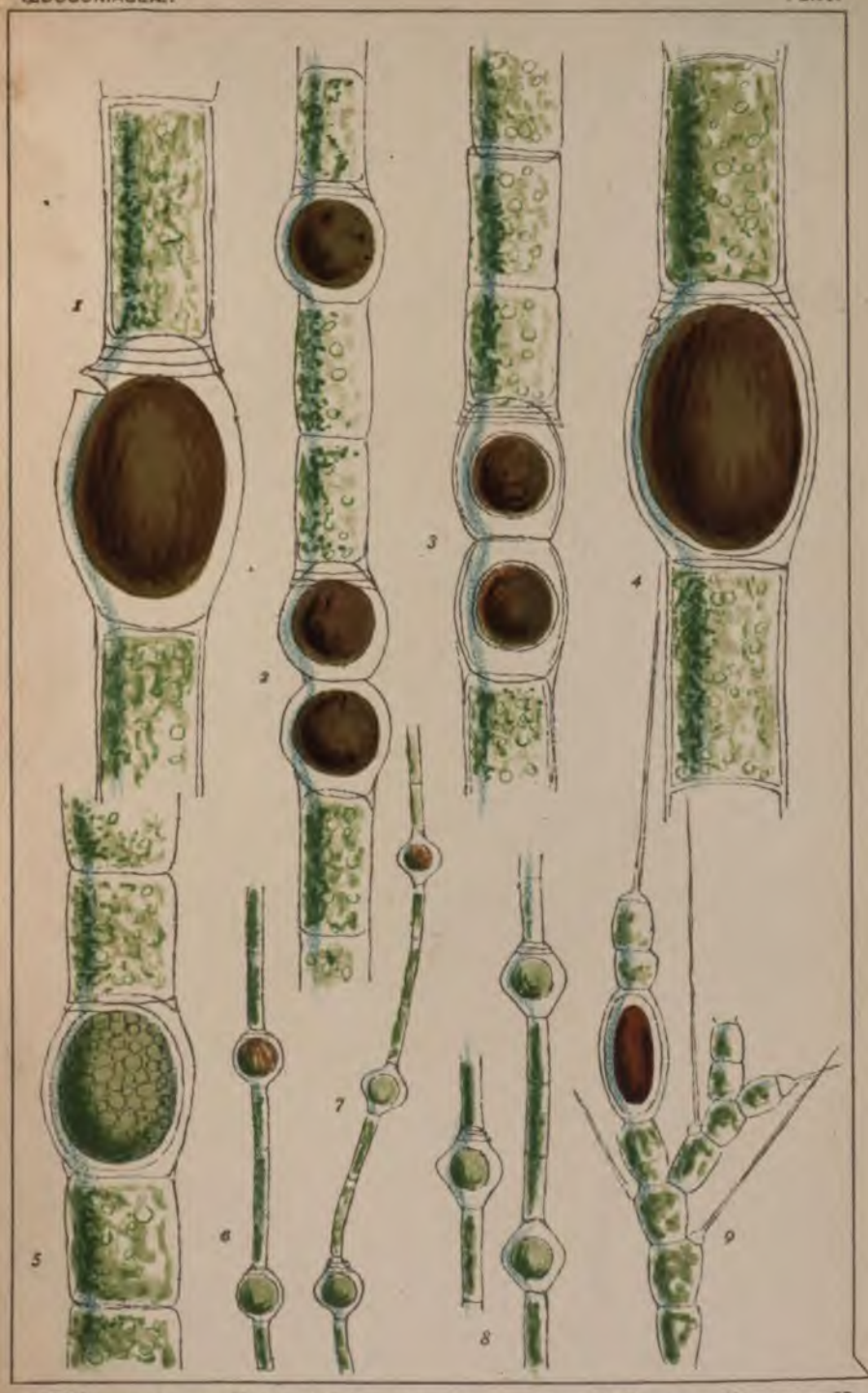




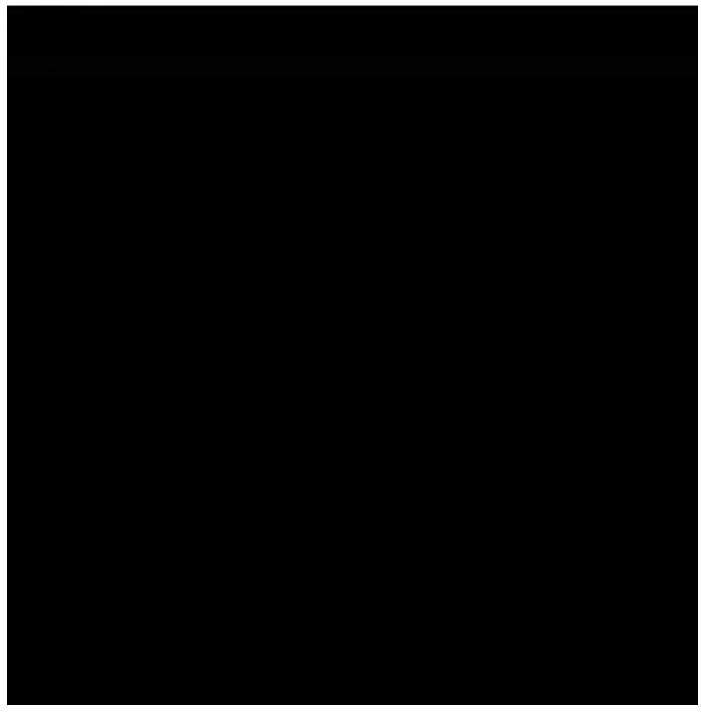
1. Œdog. Landsboroughii. Hass. 2. variety gemelliparum. Pr.
3. Œdog. rivulare. Br. 4 Œdog. longatum. Kutz.

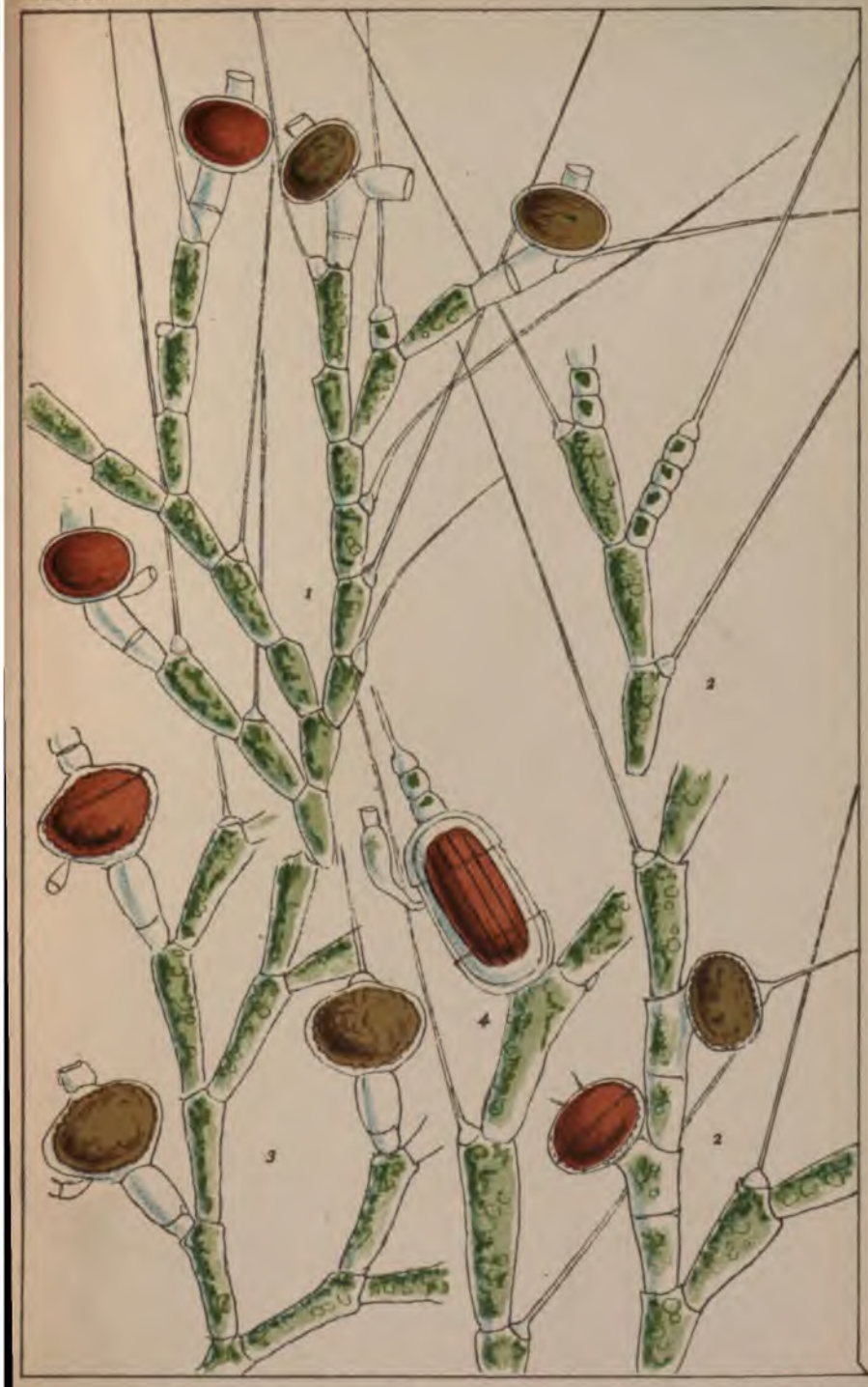




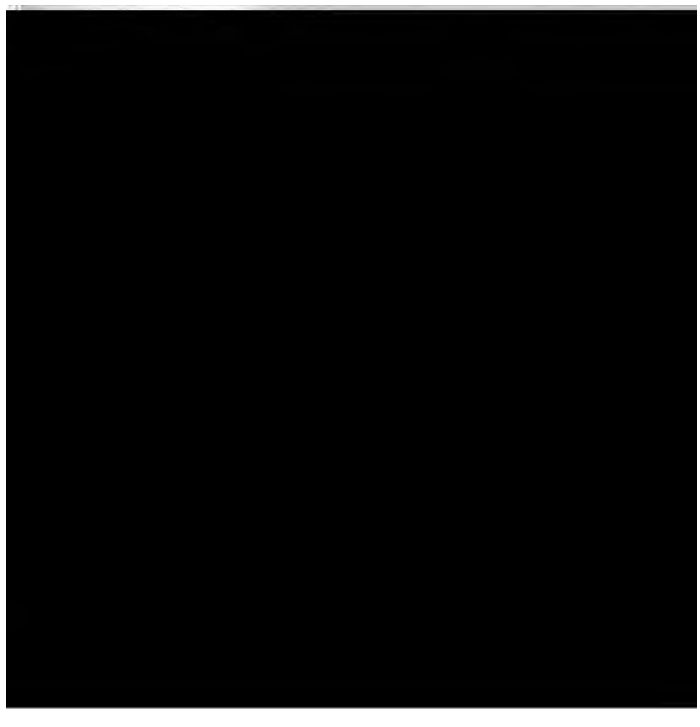


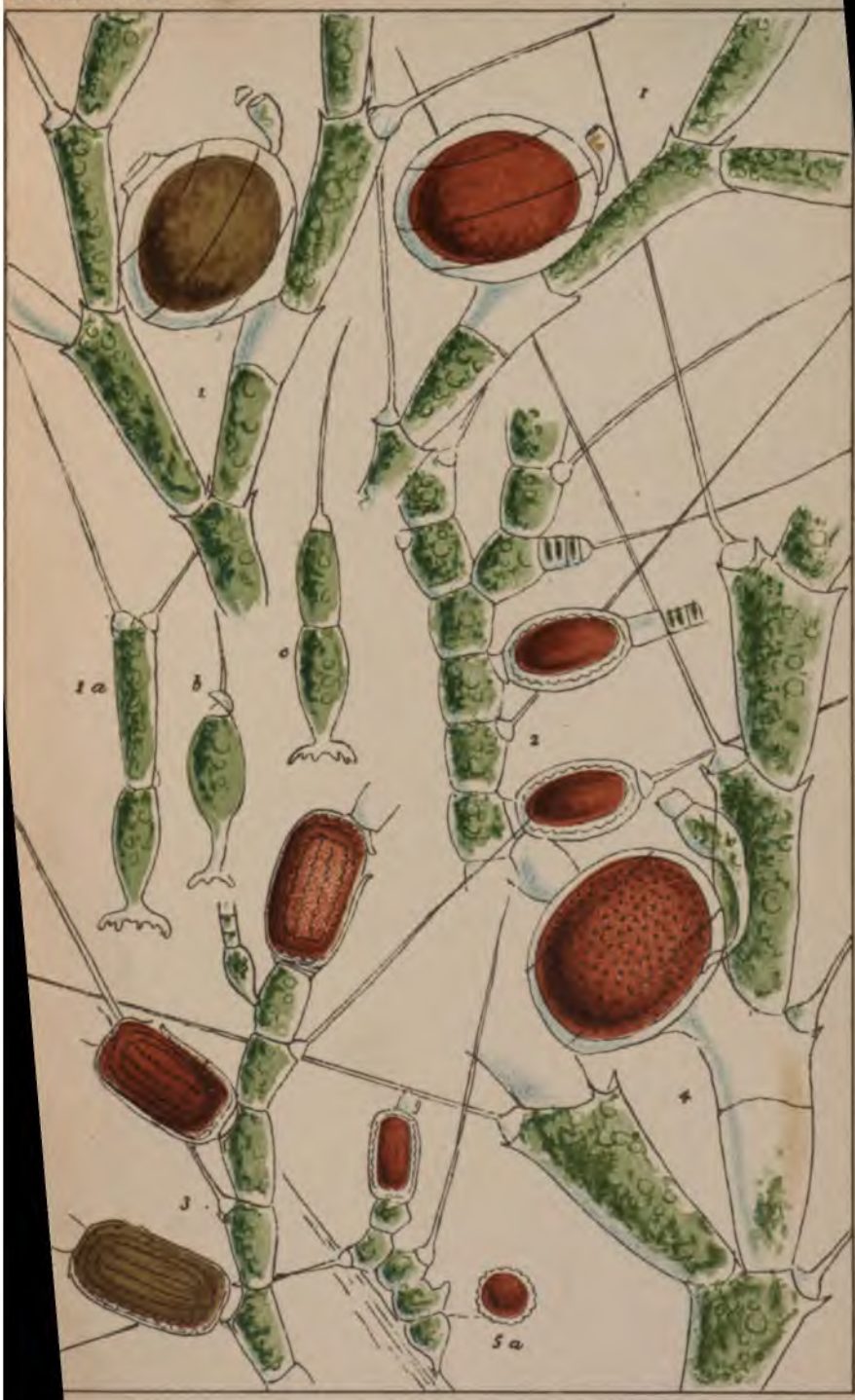
1. Œdog. crassum Hass. 2 Œdog. fasciatum. K. 3. Œdog: capillaceum K.
4. Œdog. grande. K. 5. Œdog. subsetaceum. K. 6. Œdog. tenellum K.
7. Œdog. delicatulum K. 8: Œdog. hexagonum. K. 9. Bulbochæte gracilis.





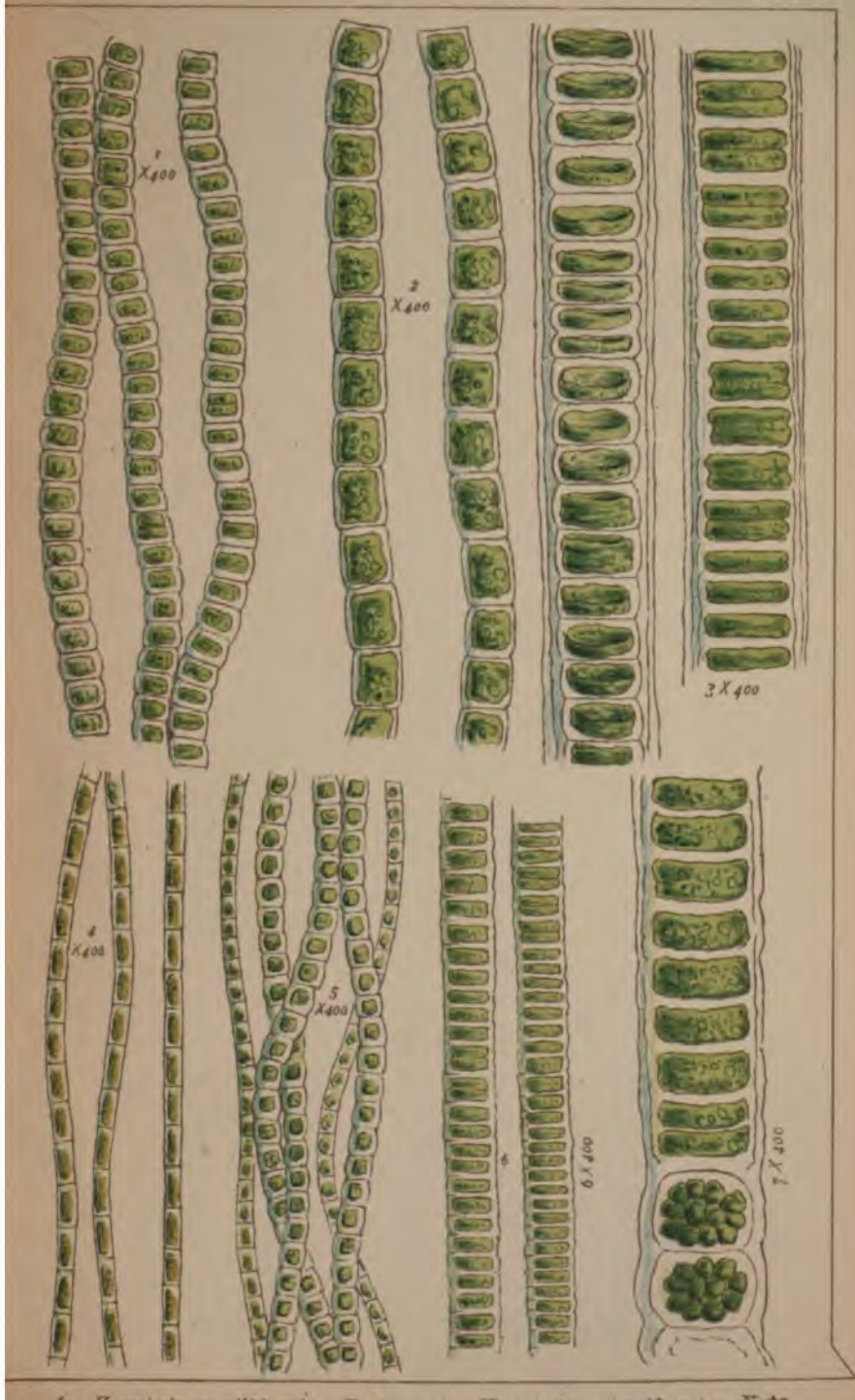
1. Bulbochæte intermedia. Dby. 2. Bulbochæte polyandra. Cleve. 3. Bulbochæte Brebissonii. Kutz. 4. Bulbochæte insignis. Pr.



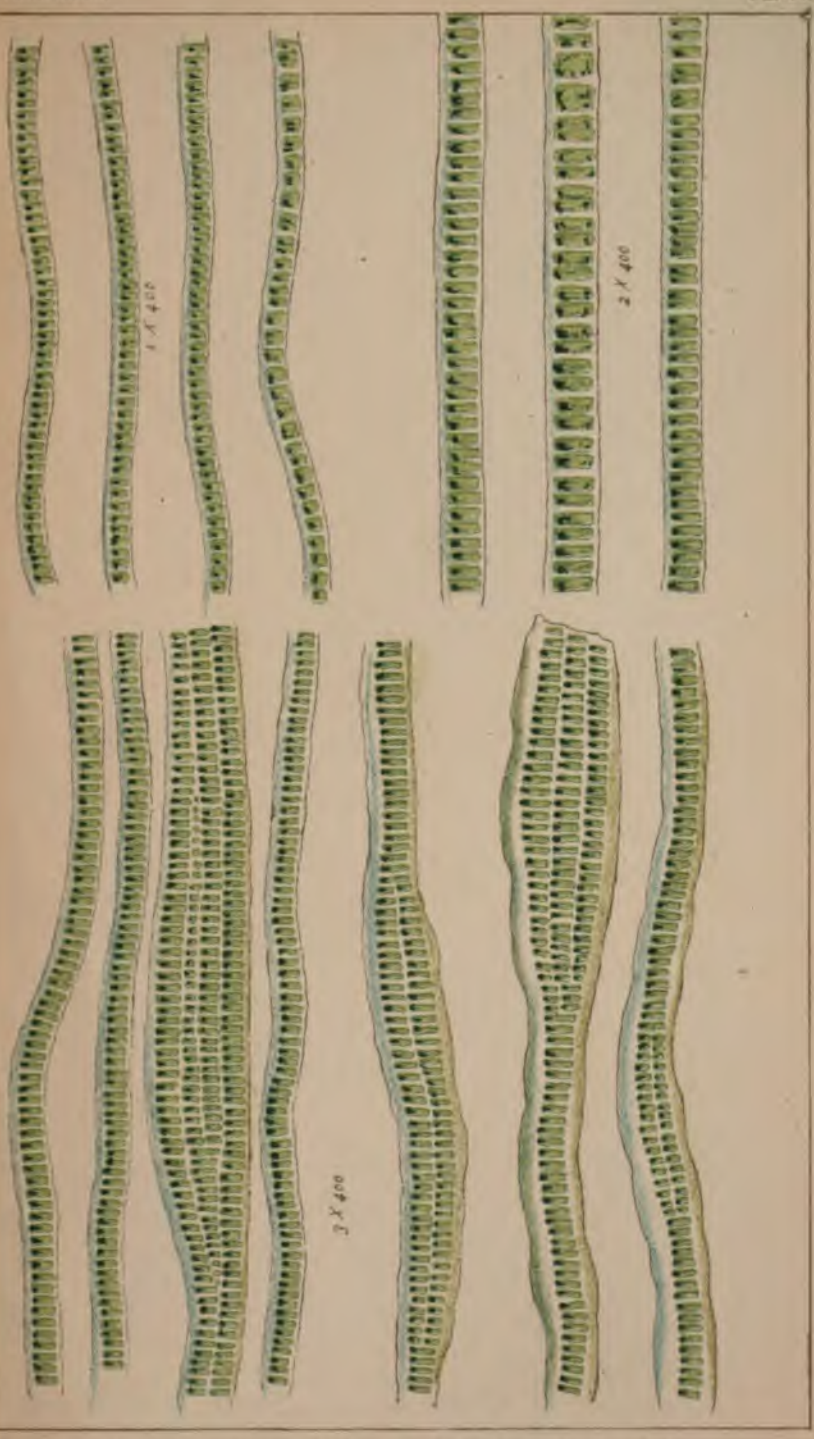


chæte setigera Ag. 2 Bulbochæte mirabilis. W. 3. Bulbochæte rectangularis.
4. Bulbochæte gigantea Pr. 5. Bulbochæte pygmæa Pr.

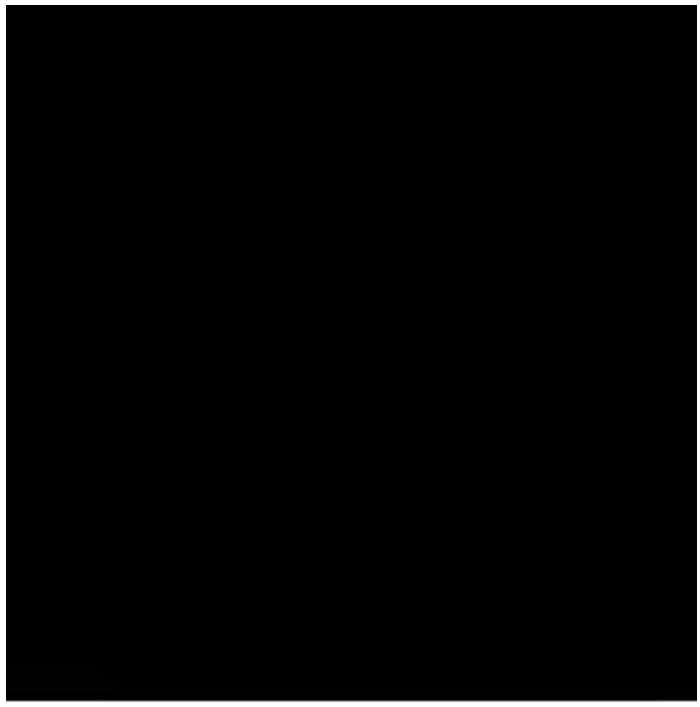
Hormiscia zonata (W. & M.) X 400.

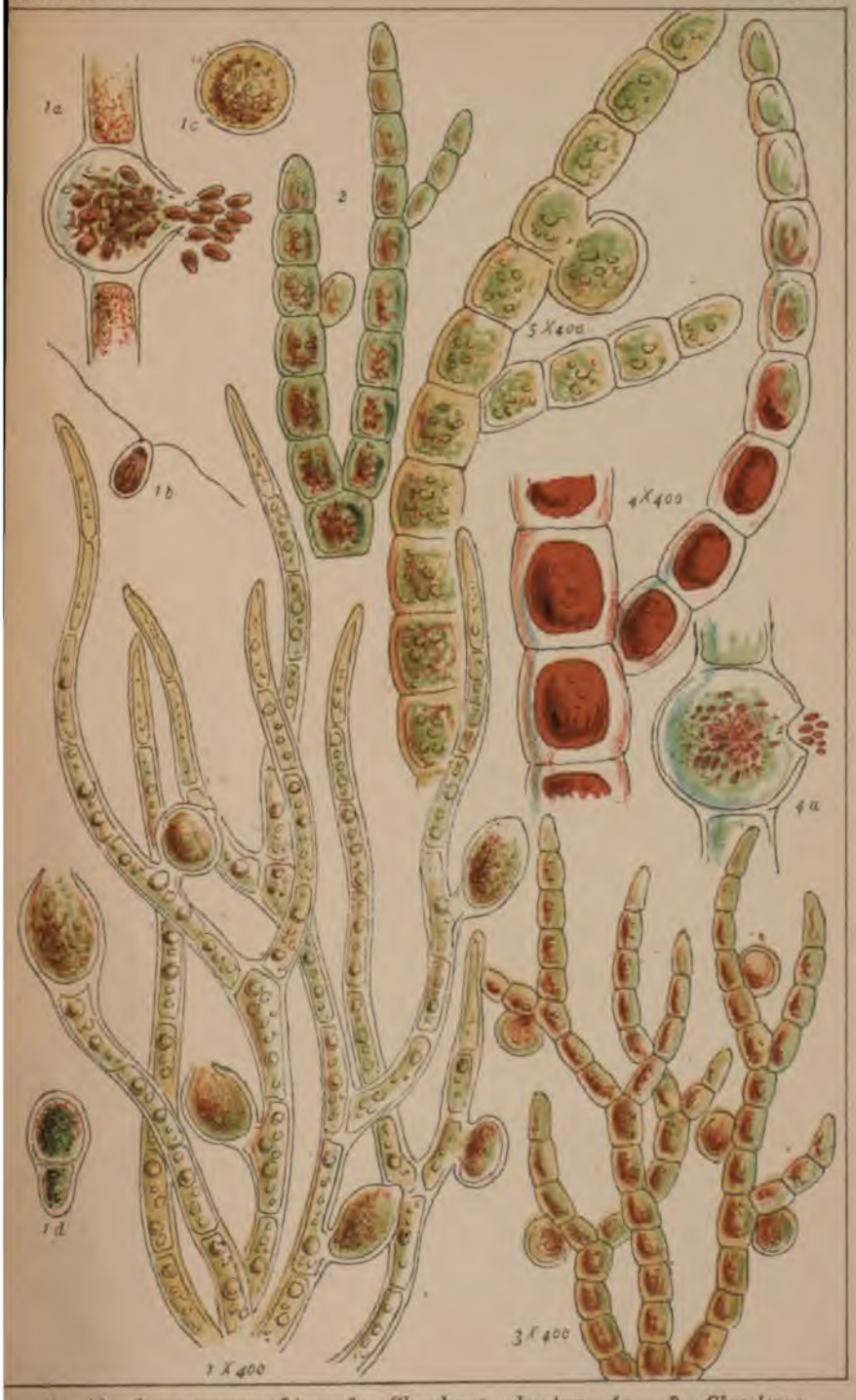


1. *Hormiscia moniliformis.* Kutz. 2. Hormiscia catæniformis. Kutz.
3. *Hormiscia speciosa (Carm.)* 4 Ulothrix variabilis. Kutz.



1. Ulothrix radicans, Kutz. 2. Ulothrix parietina, Kutz.
3. Schizogonium murale, Kutz.

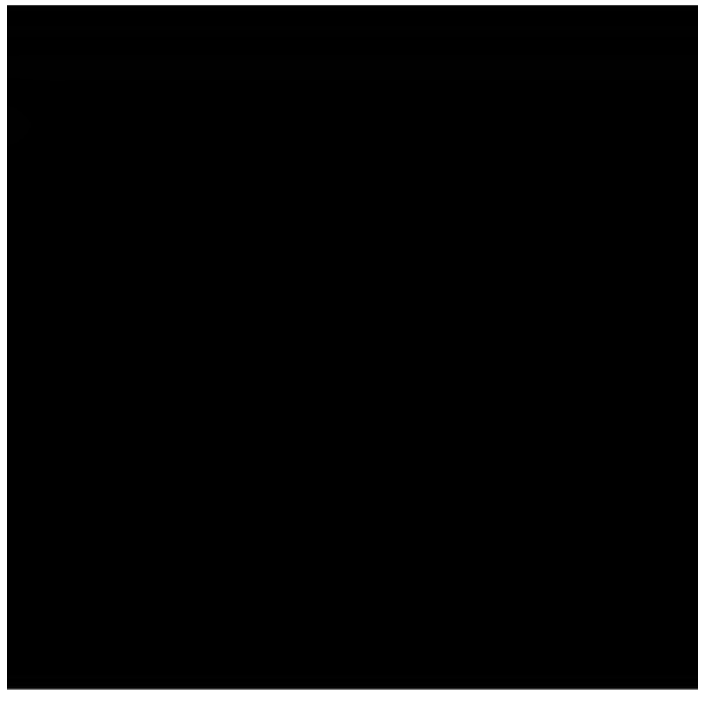




1. Chroolepus aureum. Linn. 2. Chroolepus odoratum. Ag. 3. Chroolepus abietinum var. lichenicolum. 4. Chroolepus iolithus. Linn. 5. Chroolepus ilicicolum. H.

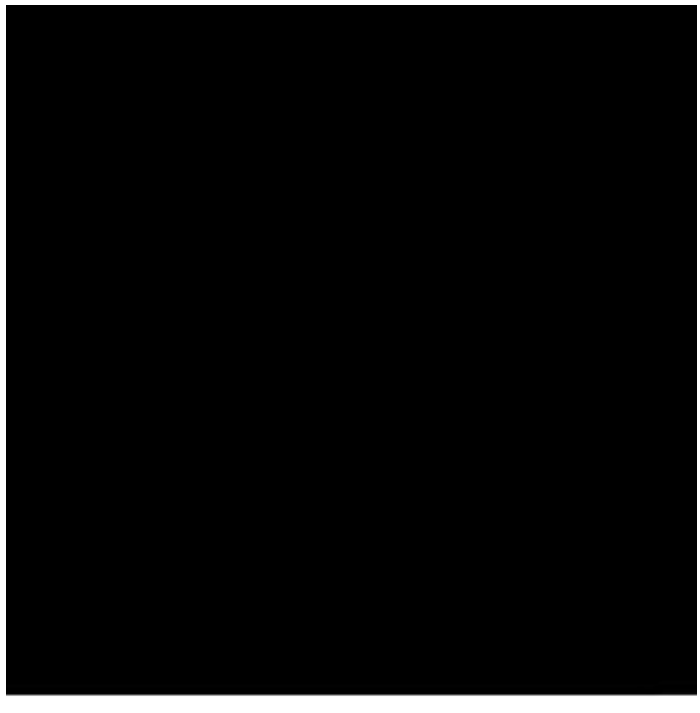
1. Microthamnion vexator. Cooke. 2 Stigeoclonium thermale. Br.
3 Stigeoclonium tenue. Ag.

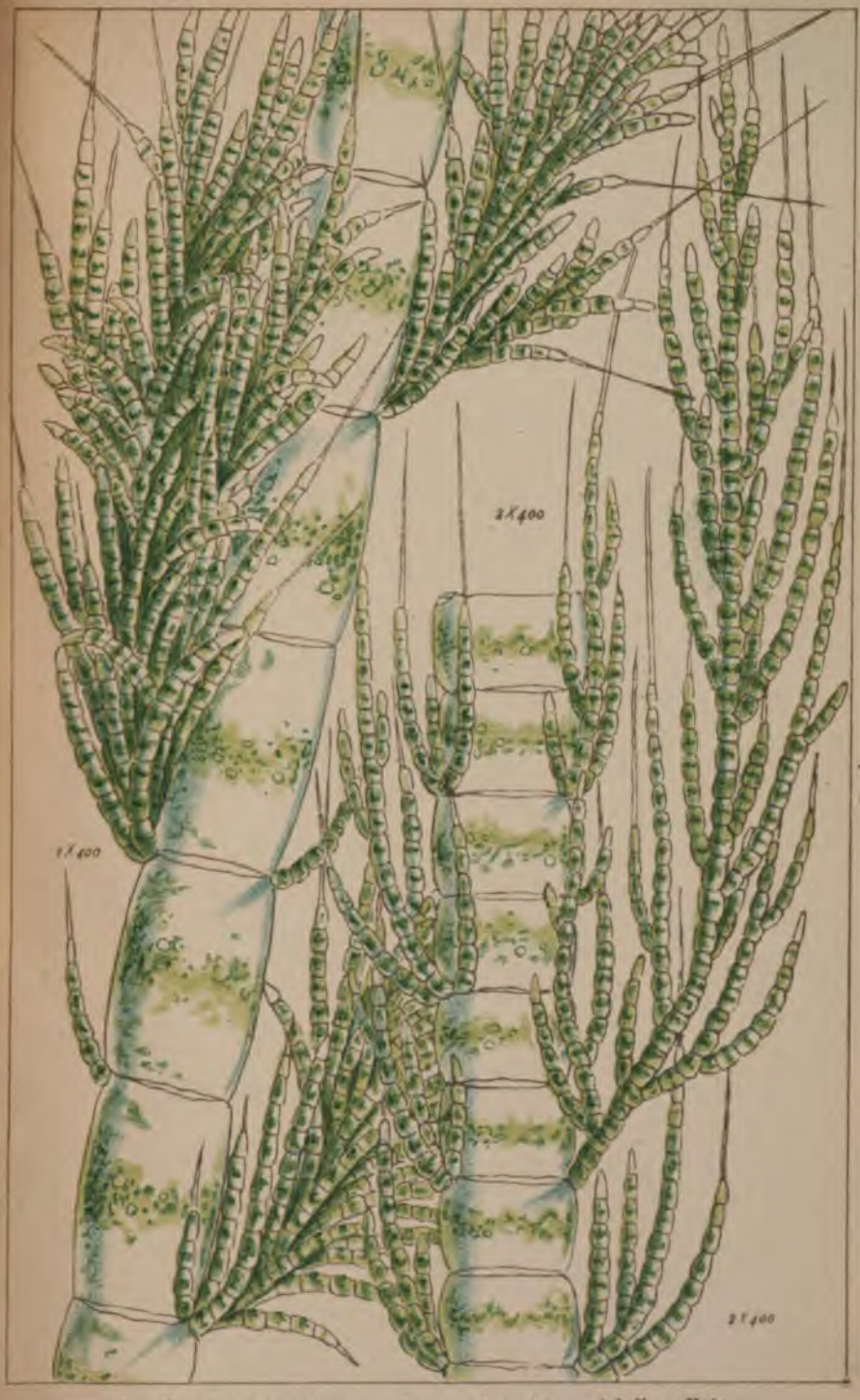
1. *Stigeoclonium protensum. Kutz.* 2. *Stigeoclonium nanum Kutz.*
3. *Stigeoclonium fastigiatum. Kutz.*



[redacted]

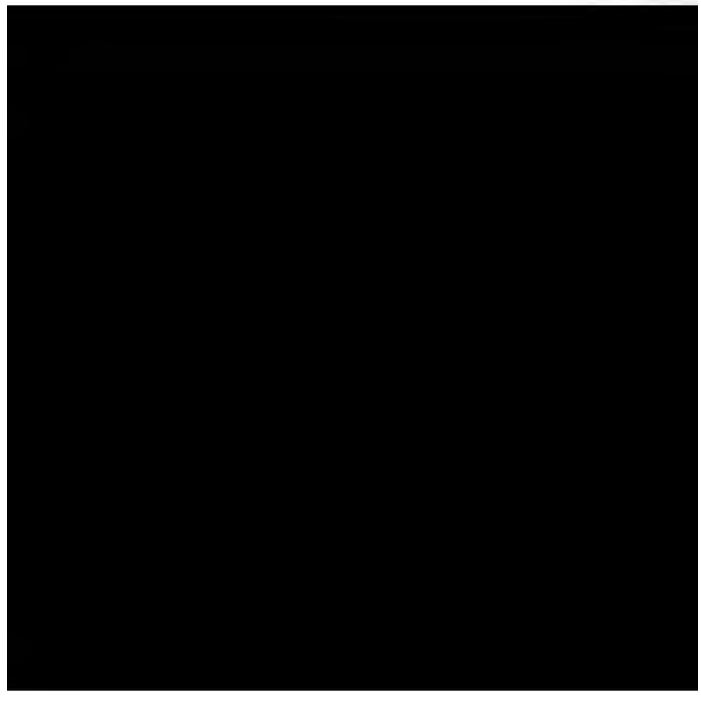
1. *Draparnaldia glomerata Ag.* 2 *variety distans, Kutz.*

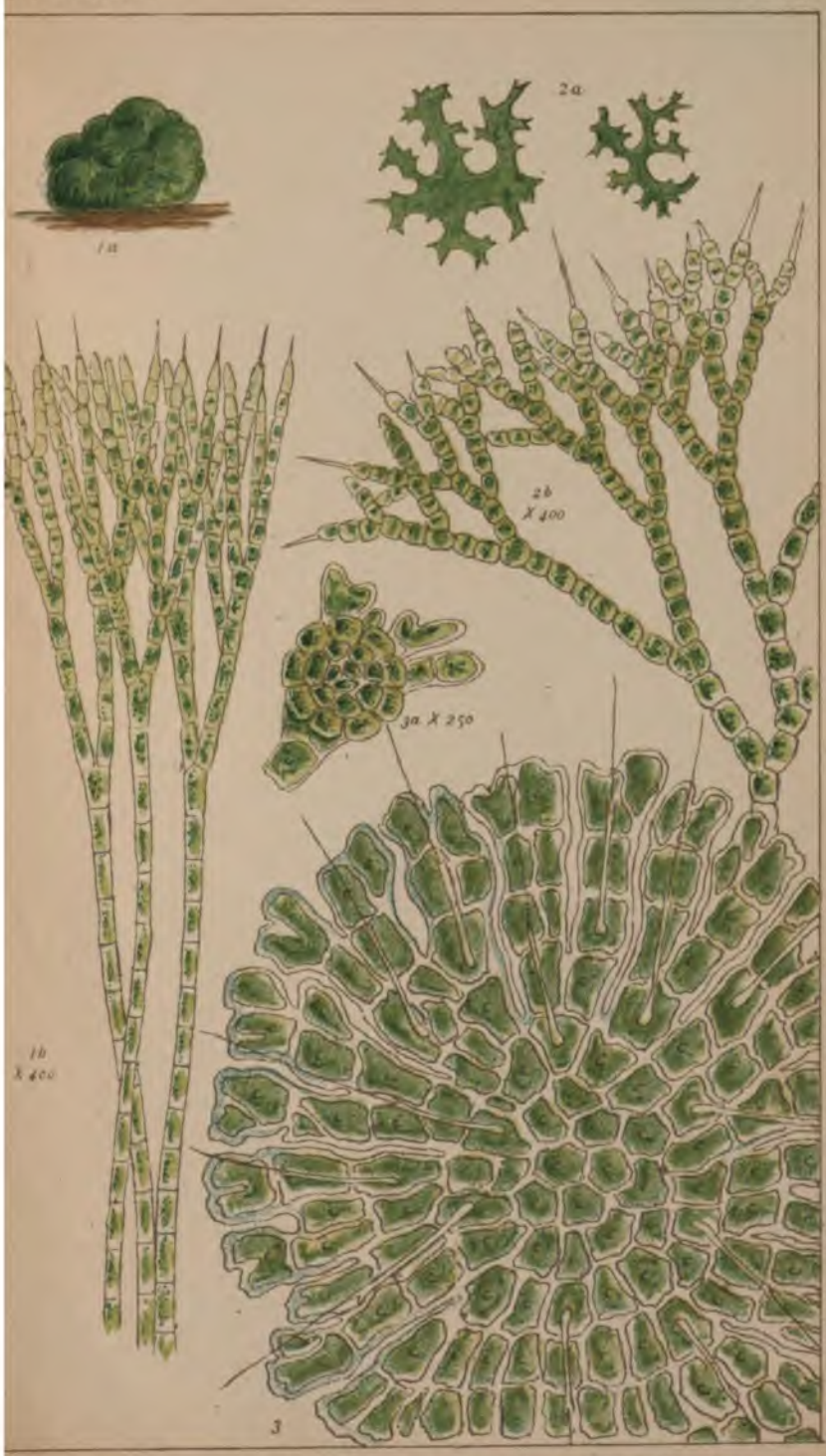




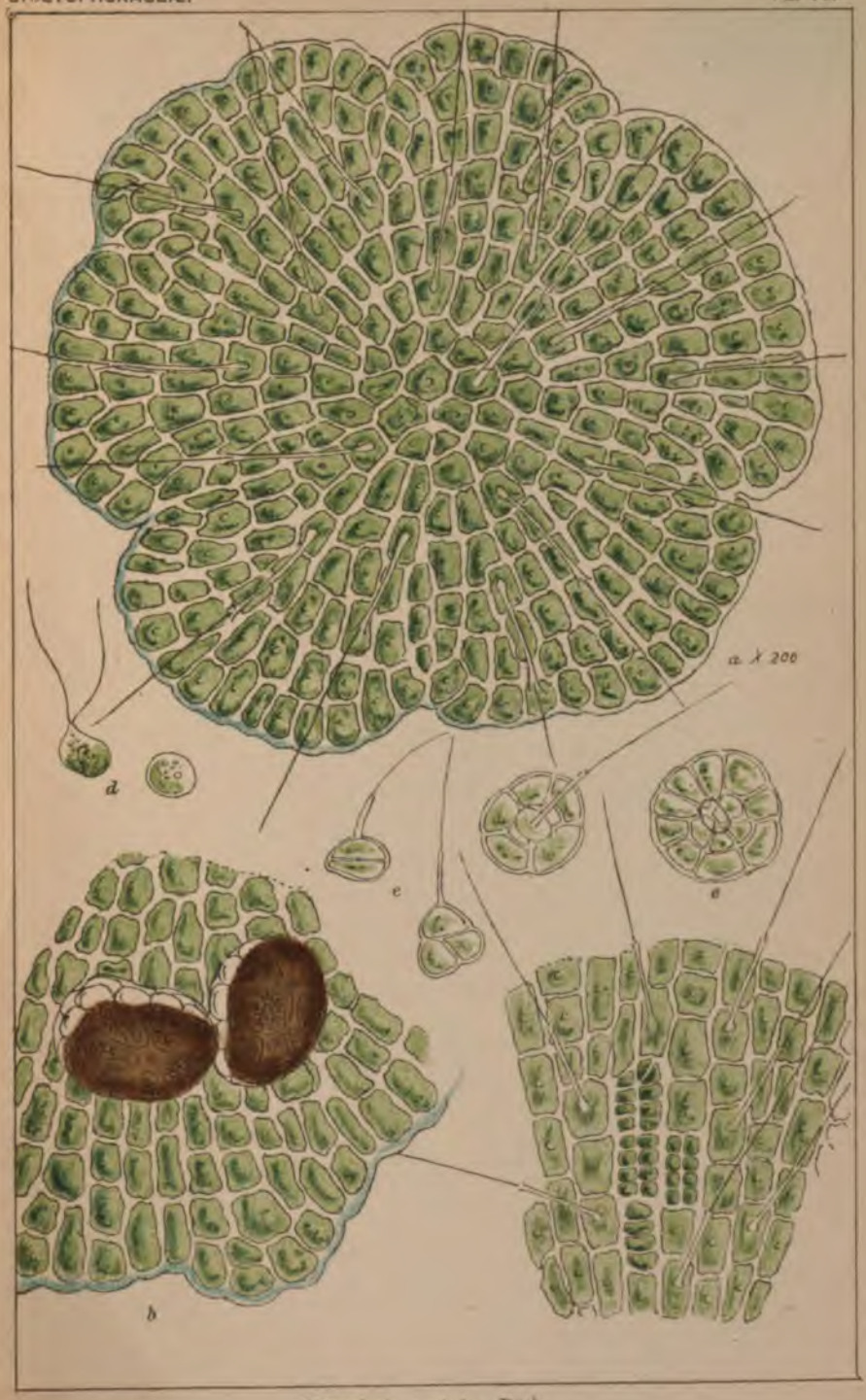
1. Draparnaldia plumosa. Ag. 2 variety pulchella. Kutz.

1. *Chætophora pisiformis. Ag.* 2 *Chætophora elegans. Ag.*



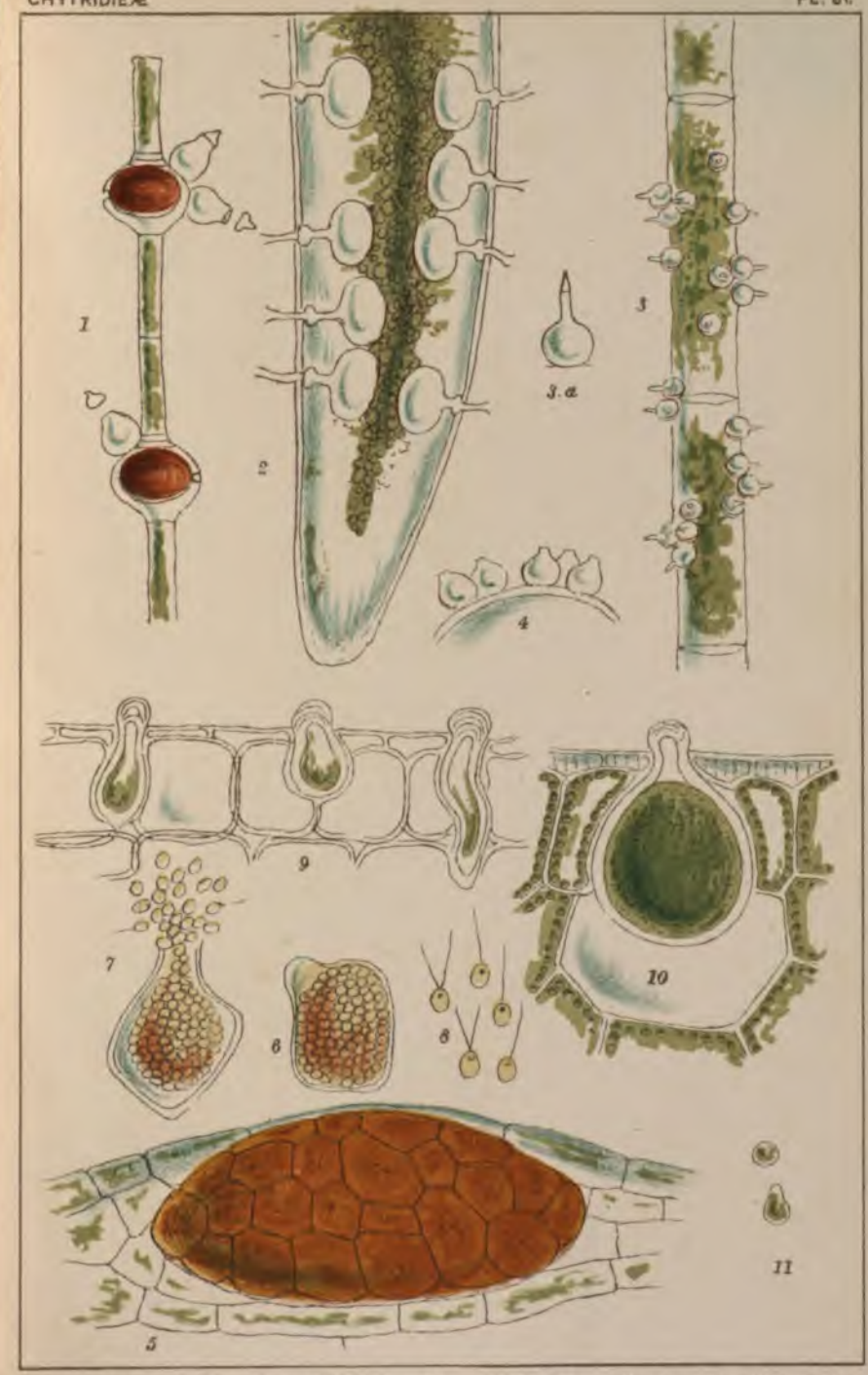


1. *Chætophora tuberculosa Ag.* 2. Chætophora endiæfolia Ag.



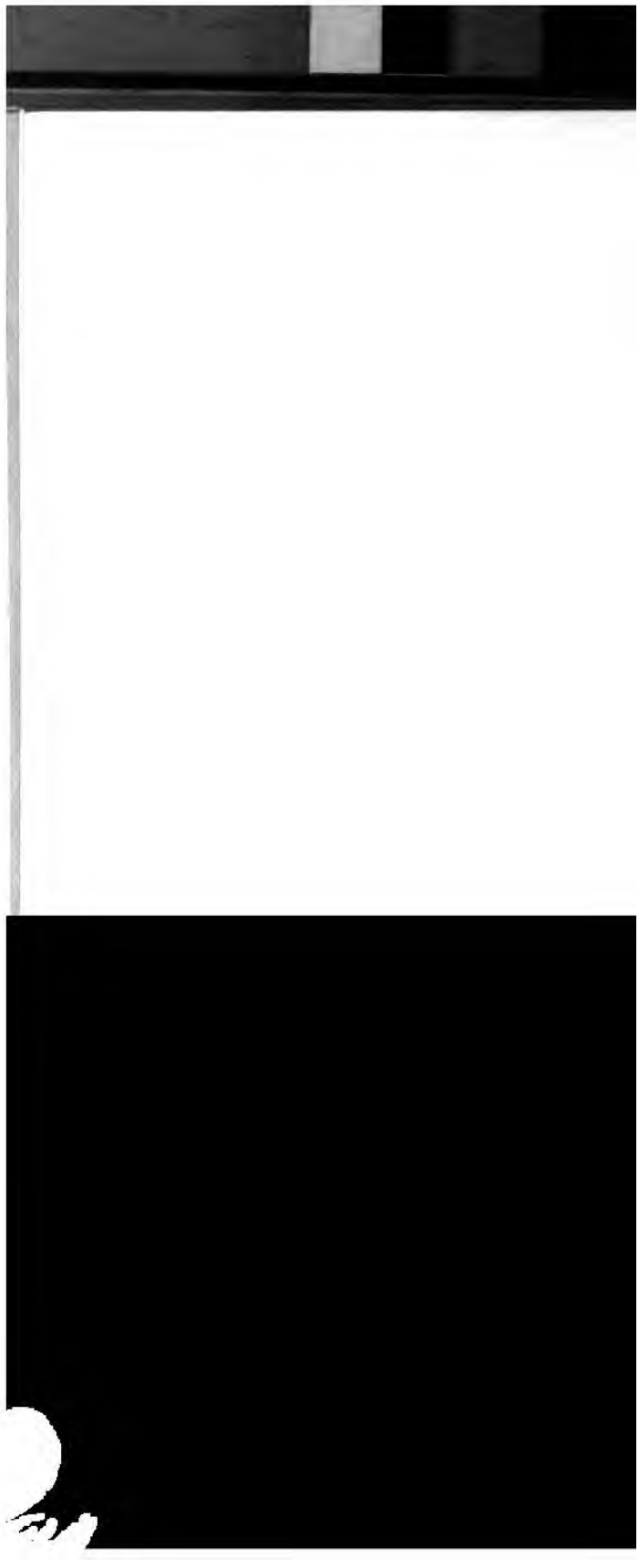
Coleochæte scutata. Bréb.

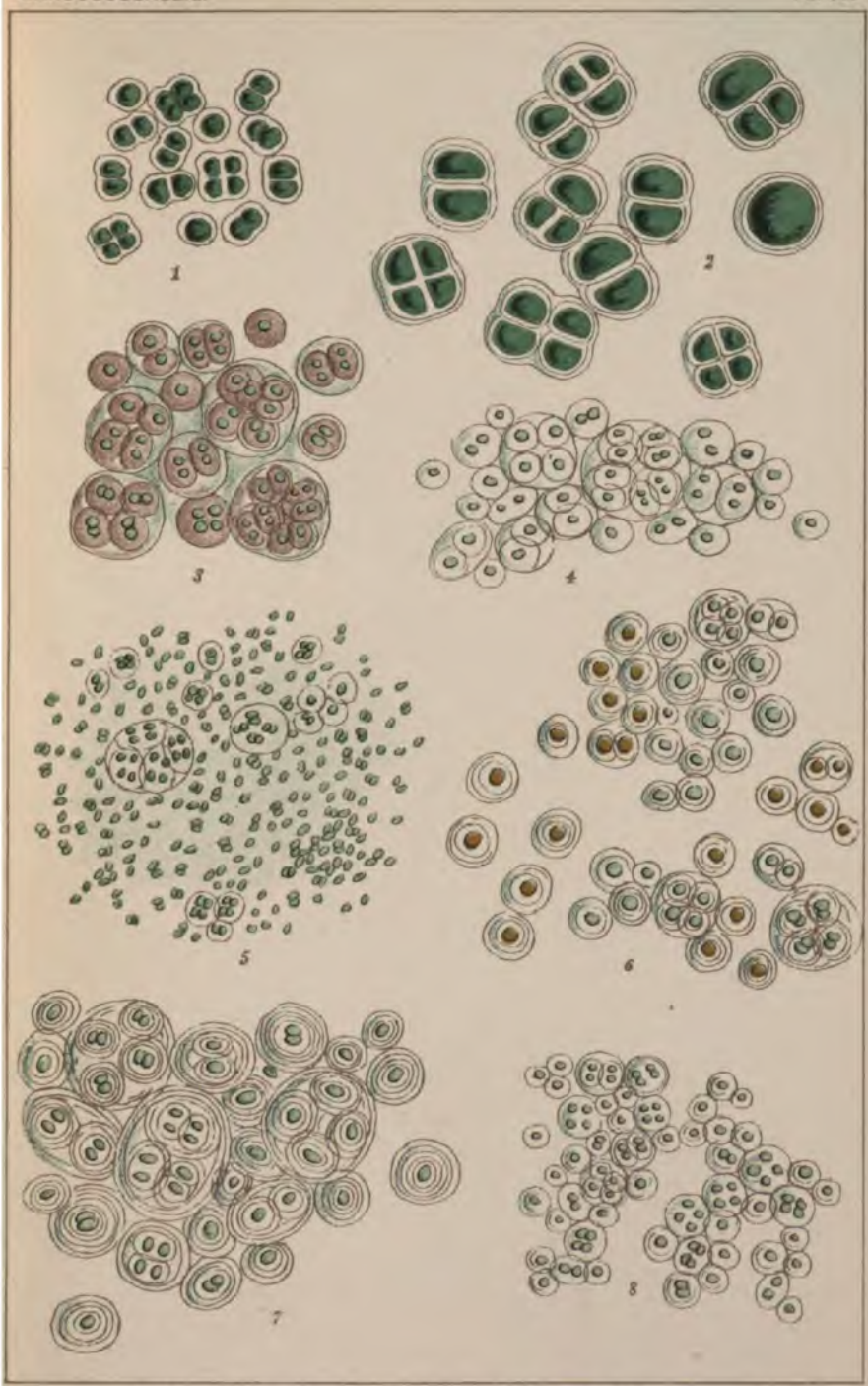
1. Coleochæte orbicularis. Prings. 2. Aphanochæte hystrix. Thw.
3. Aphanochæte repens. Br.



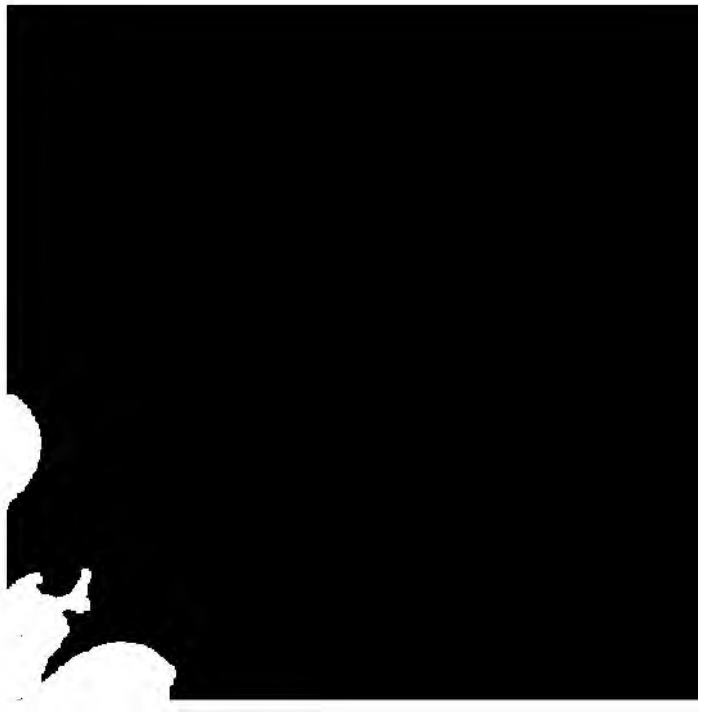
1. Chytridium acuminatum. 2. Olpidium endogenum. 3. O. ampullaceum. 4. allied species. 5-8. Synchitrium Taraxaci. 9-11. Chlorochytrium Lemnæ.

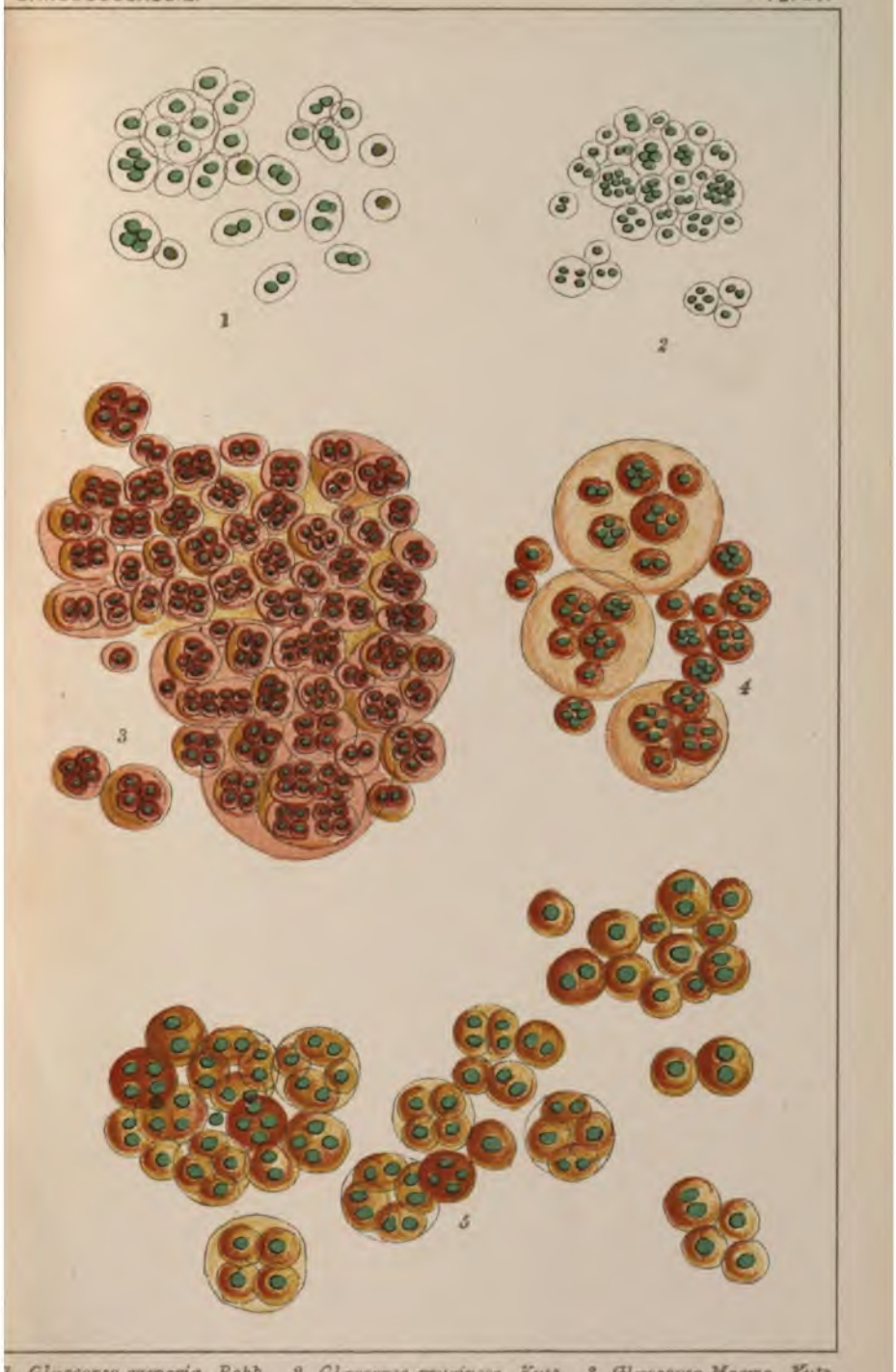
1-6. Synchitrium Mercurialis. Fckl. 7-9. Synchitrium Anemones. Wor.



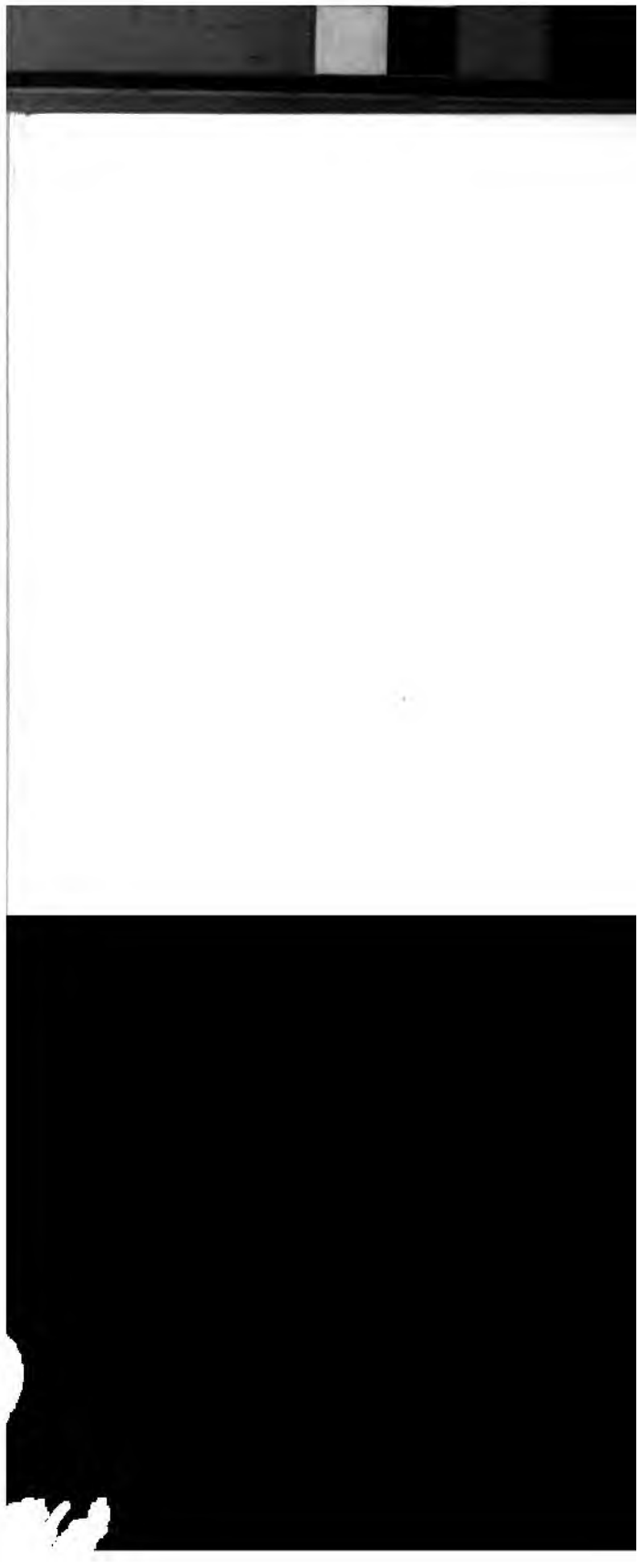


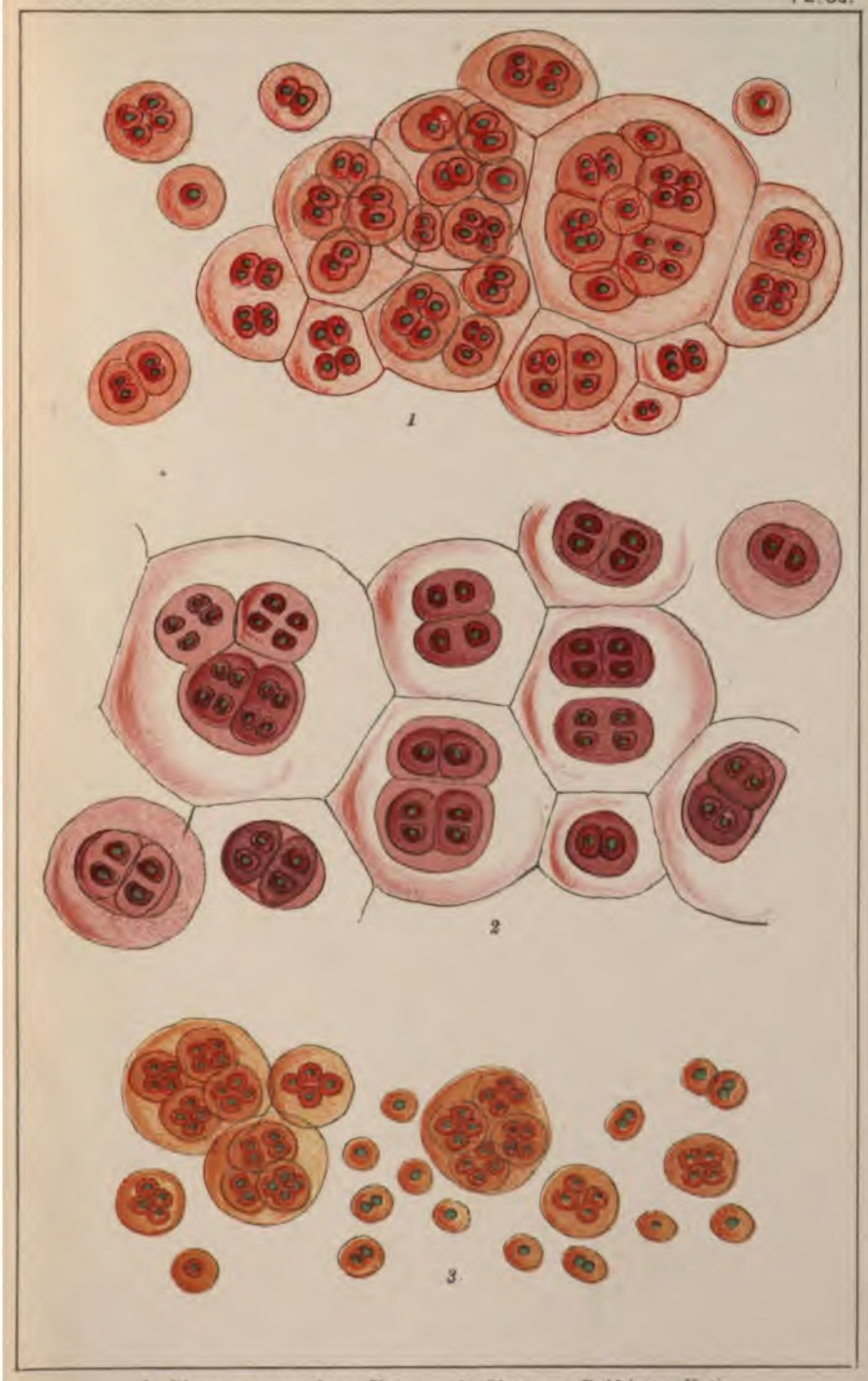
1. Chroococcus coherens. Nag. 2. Chroococcus turgidus. Nag. 3. Gloeocapsa coracina. Kutz. 4. Gloeocapsa atrata. Rabh. 5. Gloeocapsa livida. Kutz. 6. Gloeocapsa caldariorum. Rabh. 7. Gloeocapsa polydermatica. Kutz. 8. Gloeocapsa quaternata. Breb.



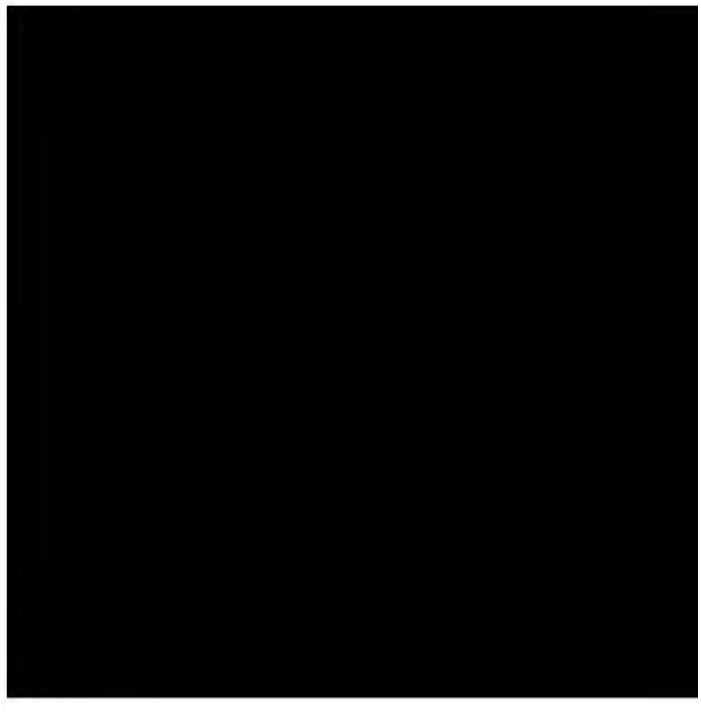


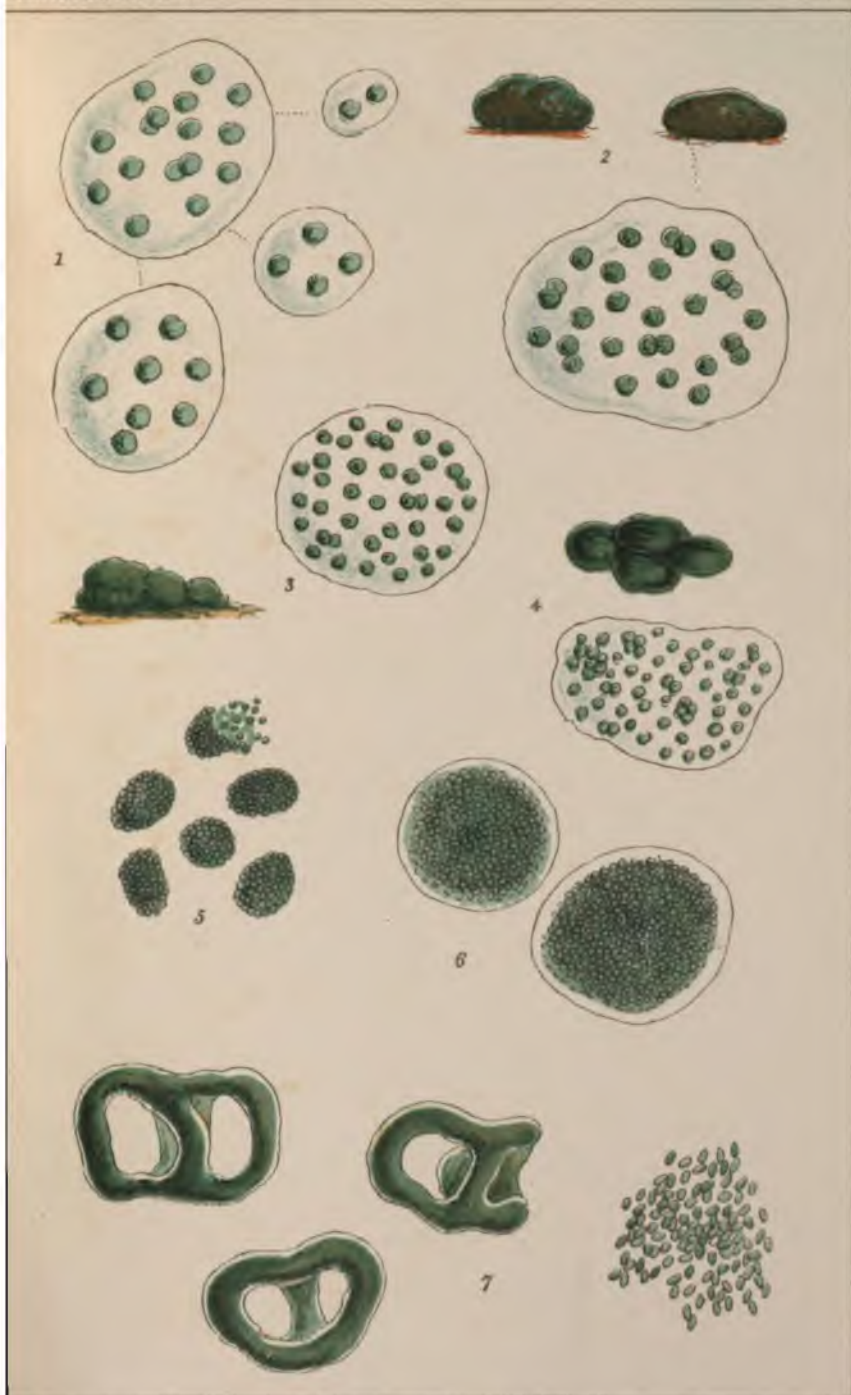
1. *Glæocapsa arenaria. Rabh.* 2. *Glæocapsa æruginosa. Kutz.* 3. *Glæocapsa Magma. Kutz.* 4. *Glæocapsa rupicola. Kutz.* 5. *Glæocapsa rupestris. Kutz.*



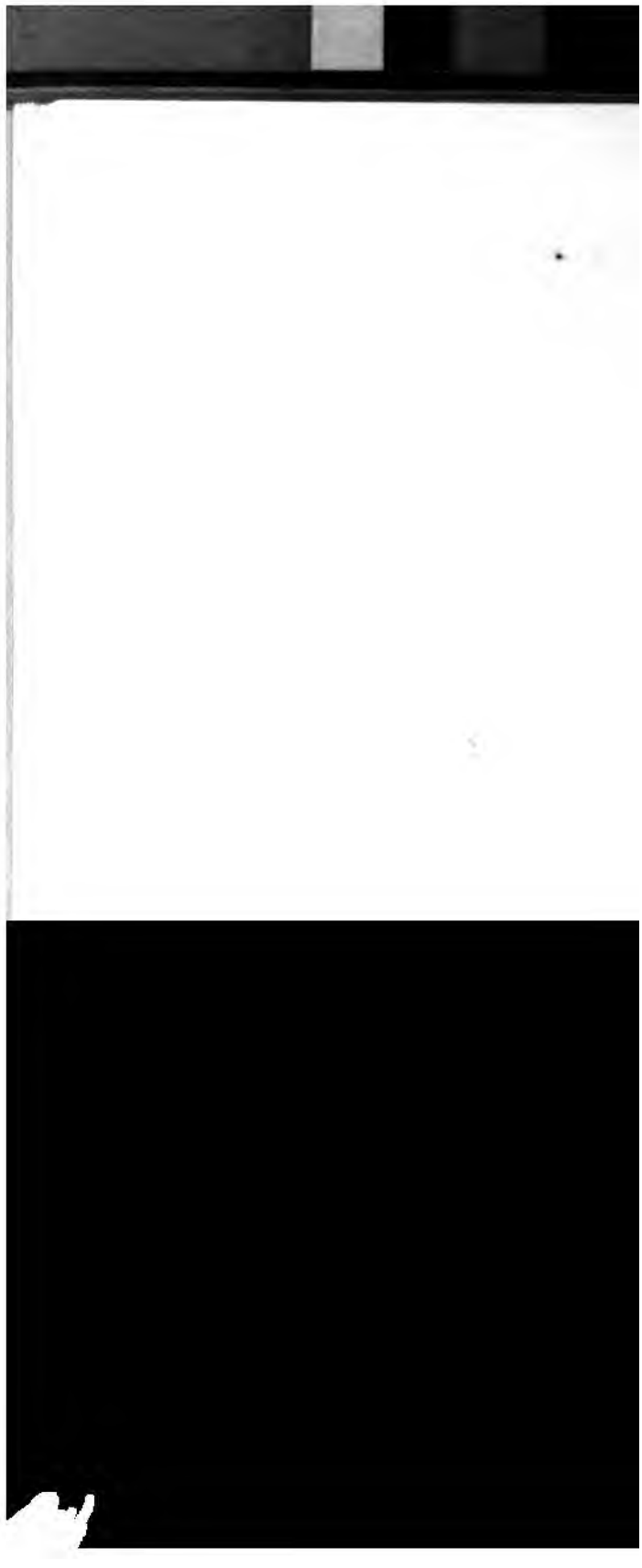


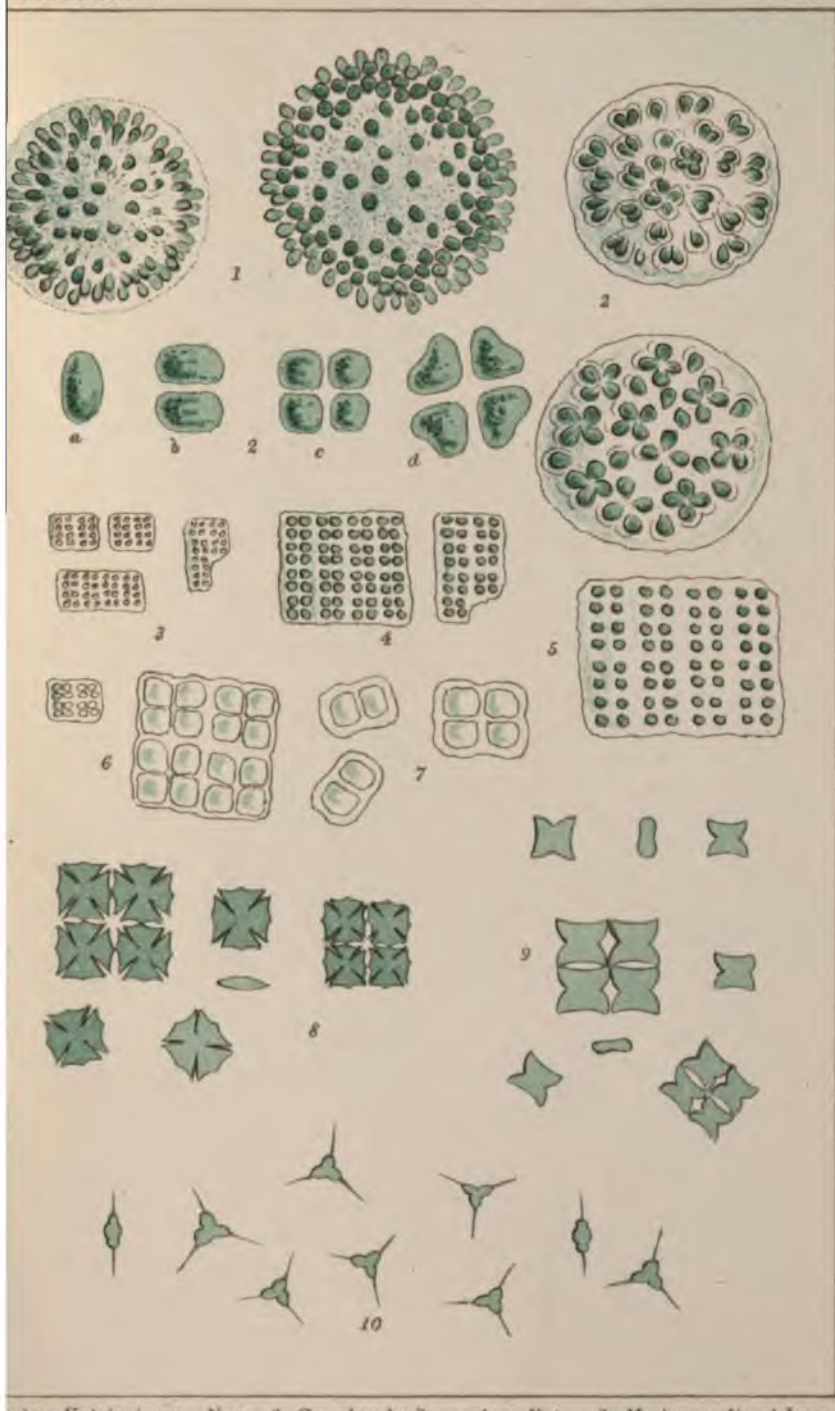
1. Glœocapsa sanguinea. Kutz. 2. Glœocapsa Ralfsiana. Kutz.
3. Glœocapsa Shuttleworthiana. Kutz.



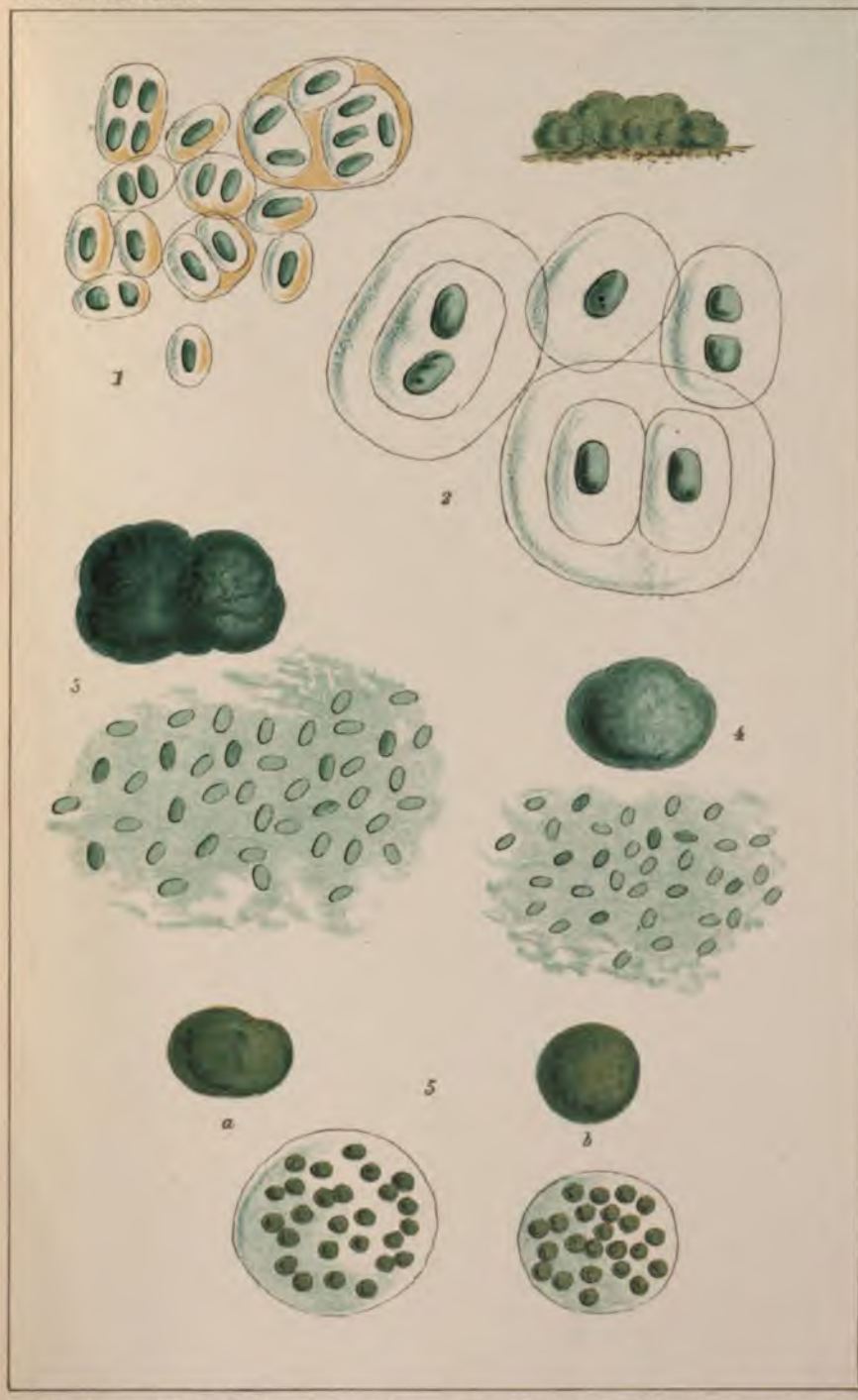


hanocapsa virescens. Rabh. 2. Aphanocapsa rivularis. Rabh. 3. Aphanocapsa Grevillei. Rabh.
hanocapsa depressa. Rabh. 5. Microcystis protogenita. Rabh. 6. Microcystis marginata. Men.
7. Clathrocystis æruginosa. Henfr.

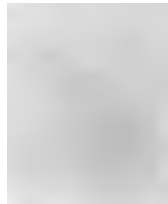


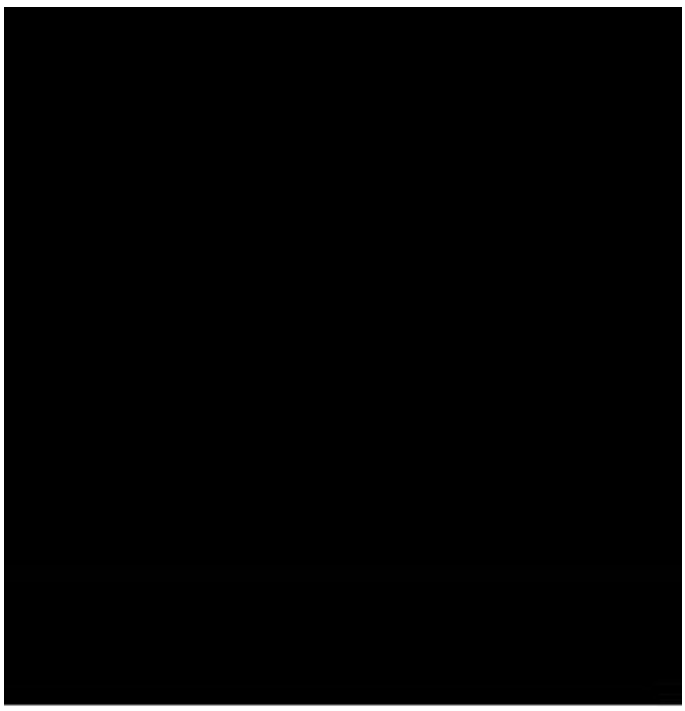


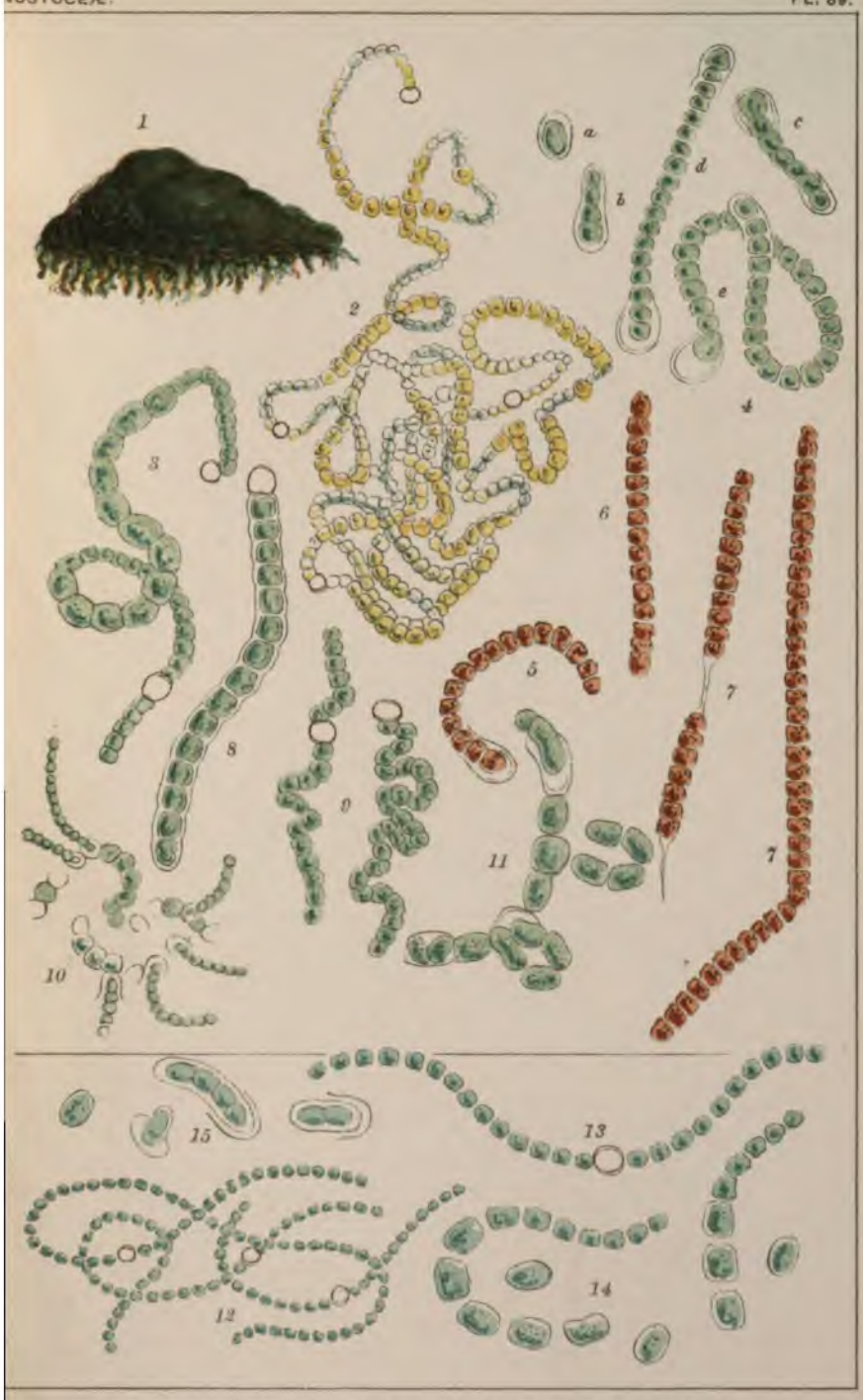
rium Kutzingianum. Nag. 2. Gomphosphæria aponina. Kutz. 3. Merismopædia violacea. Kutz. pædia glauca. Nag. 5. M. punctata. Mey. 6. Merismopædia ventriculi. Rob. 7. M. renis. Rabh. trapedia Crux-Michæli. R. 9. Tetrapedia Reinschiana. Ar. 10. Tetrapedia setigera. Ar.



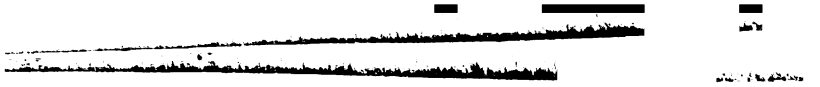
1. Glœothece cystifera. Rabh. 2. Glœothece granosa. Rabh. 3. Aphanothece prasina. Br. 4. Aphanothece stagnina. Br. 5. Homalococcus Hassallii. Kutz.

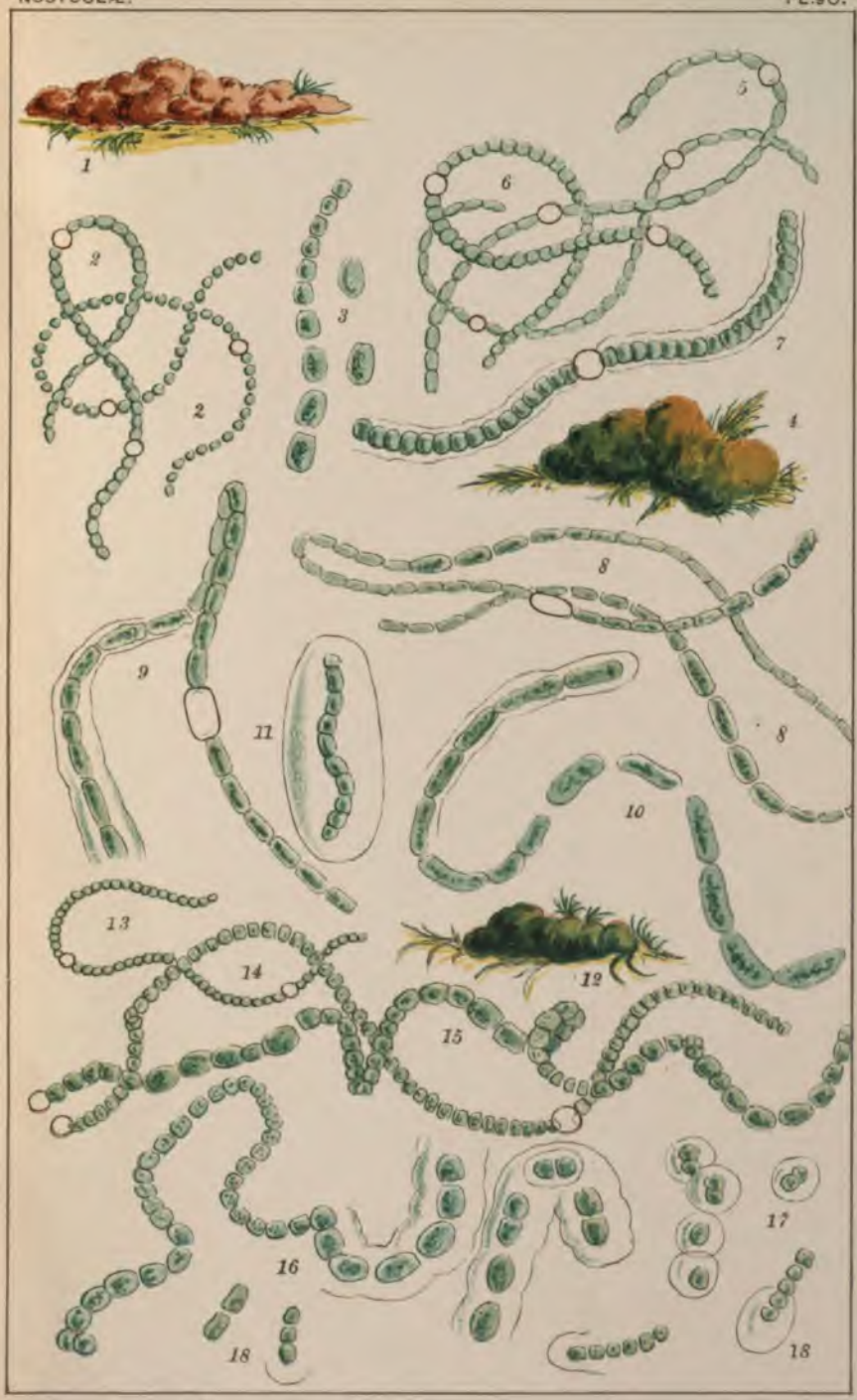




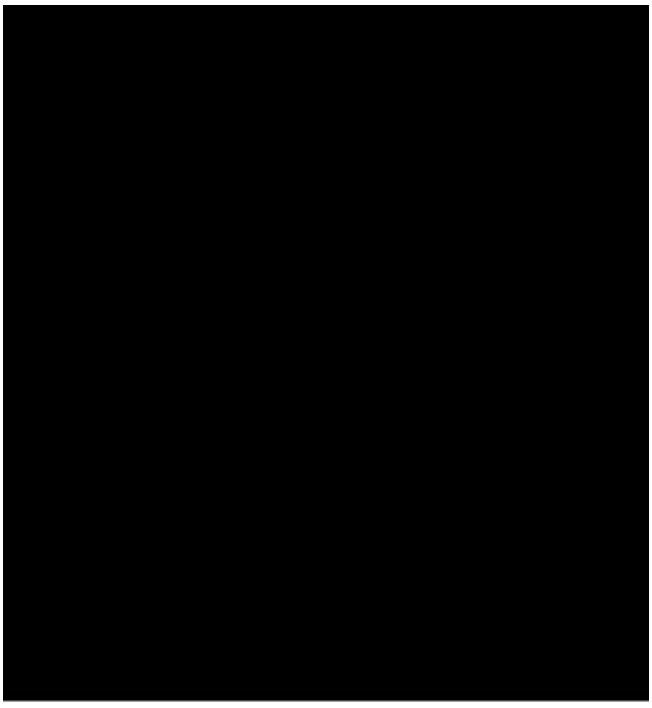


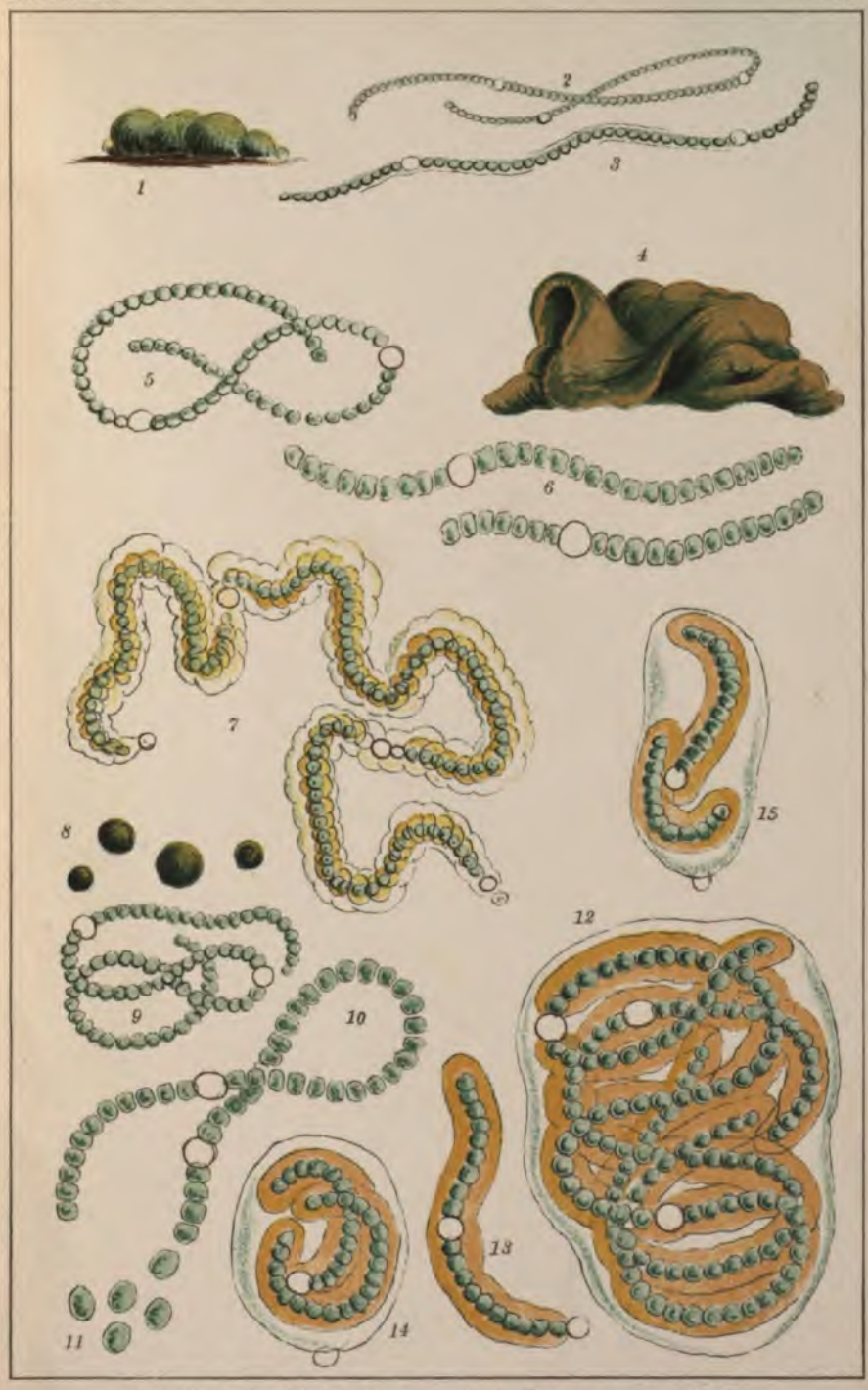
1—11. Nostoc Lineckia. Born. 12—15. Nostoc piscinale. Kutz.





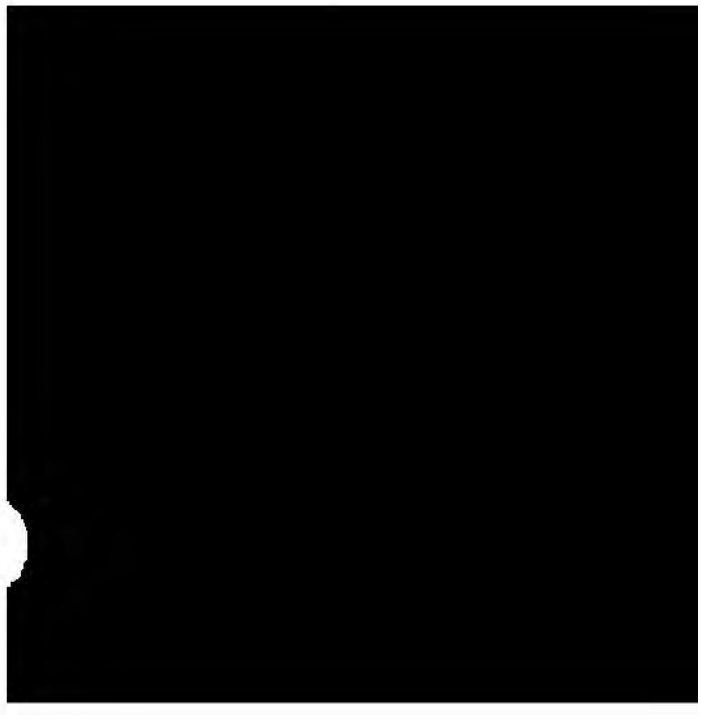
1—3. Nostoc carneum. Ag. 4—7. Nostoc spongiæforme. Ag.
8—11. Nostoc ellipsosporum. Desm. 12—18. Nostoc muscorum. Ag.

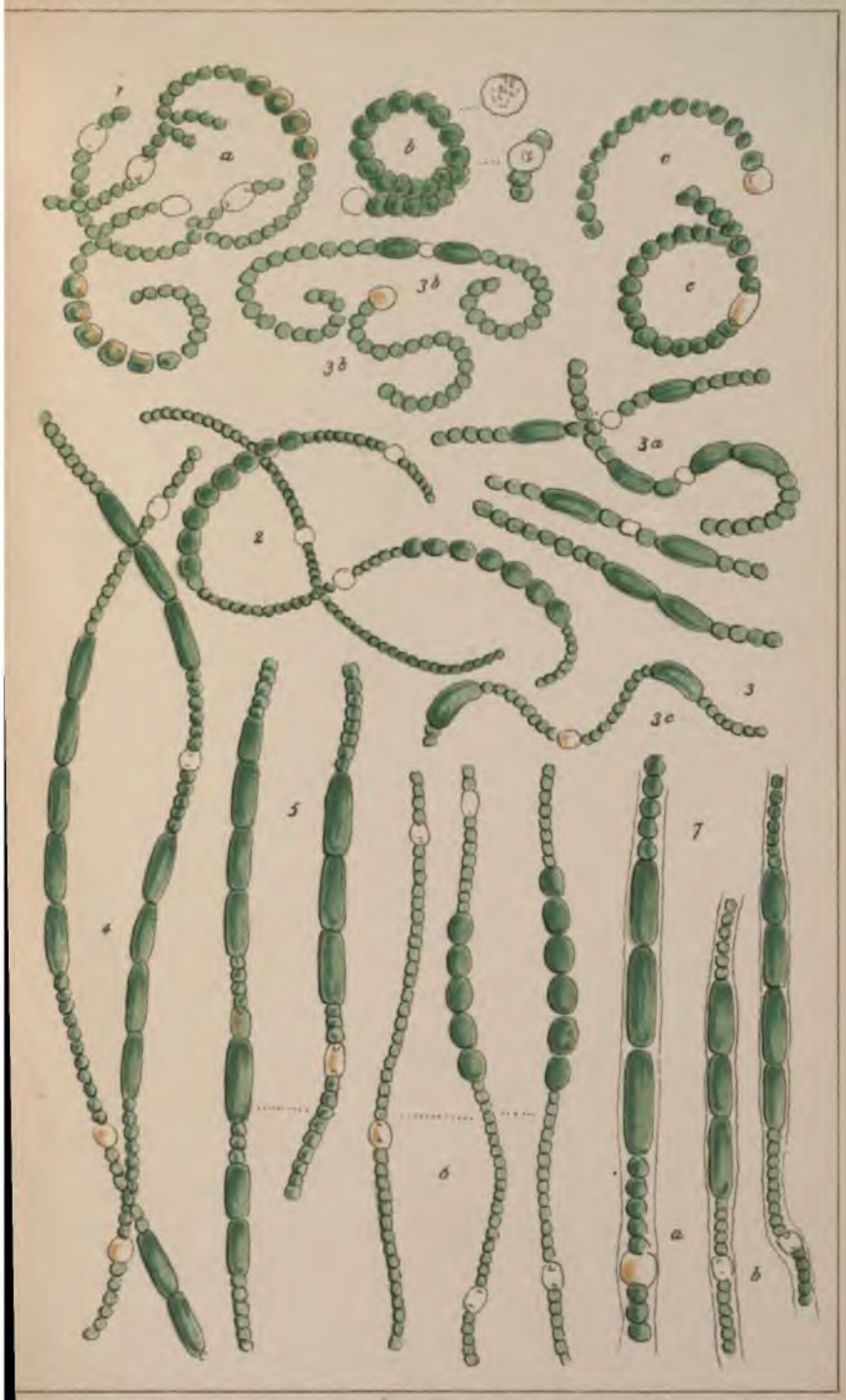




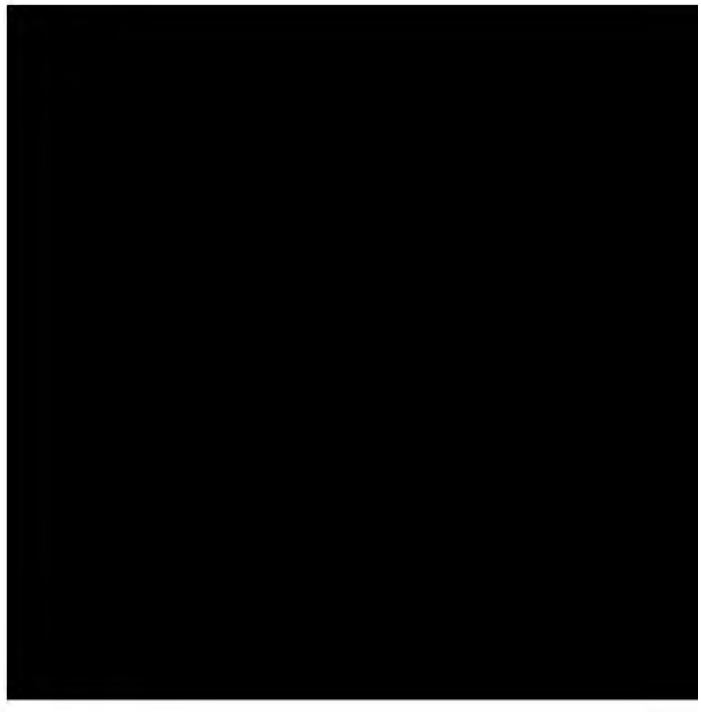
1—3. Nostoc humifusum. Carm. *4—7. Nostoc commune. Vauch.*
8—11. Nostoc sphæricum. Vauch. *12—15. Nostoc rupestre. Kutz.*

1—3. Nostoc macrosporum. Men. *4—6. Nostoc cæruleum. Lyngb.*
7—9. Nostoc pruniforme. Ag. *10—17. Nostoc verrucosum. Vauch.*





Anabaena flos-aquæ. Fr. 2. Anabaena variabilis. K. 3. Anabaena Hassallii. N. & W. nabaena inæquabis. (Ralfs.) 5. Anabaena Thwaitesii. (Ralfs.) 6. Anabaena oscillarioides. (Borry. 7. Anabaena Smithii. (Ralfs.)



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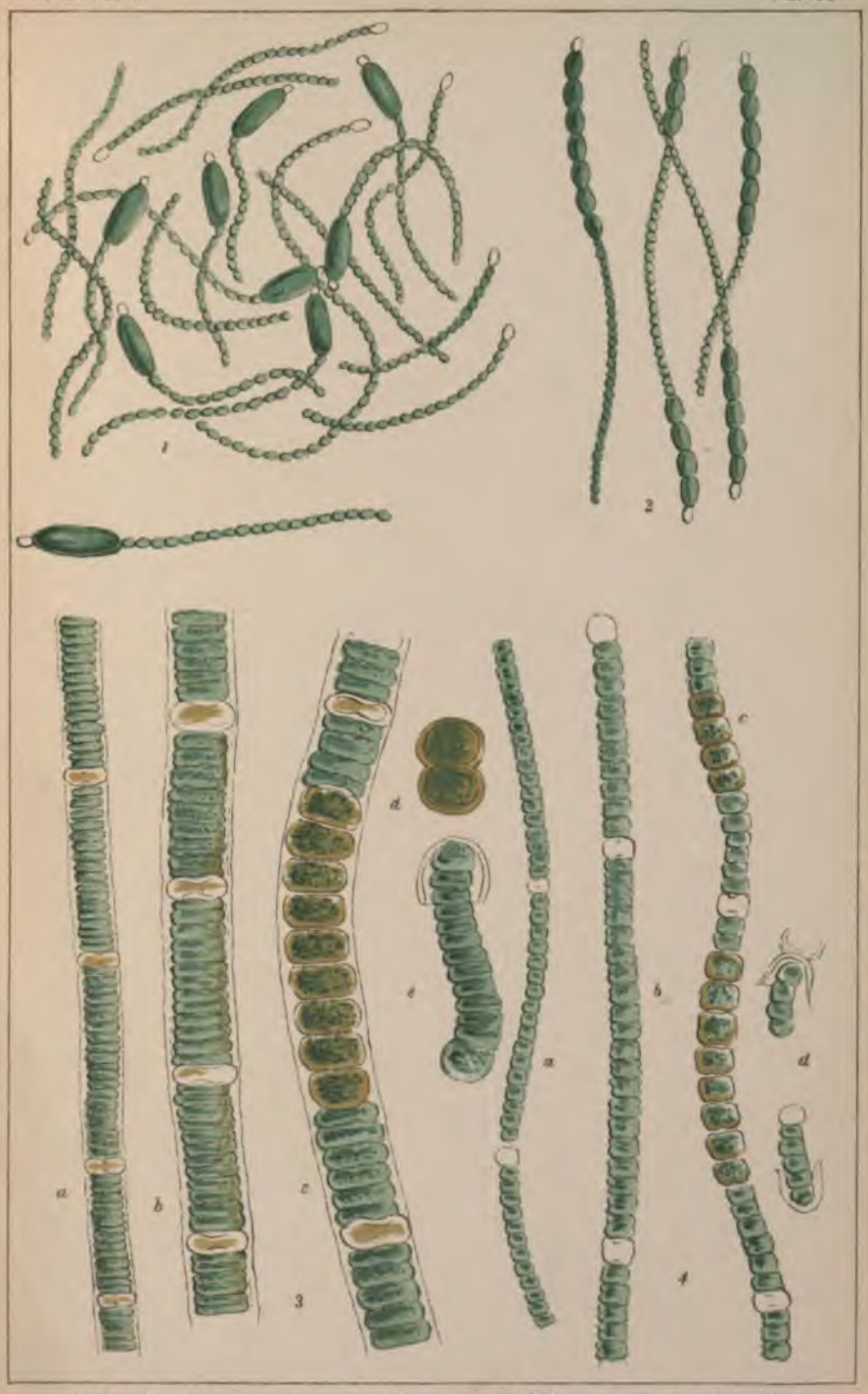
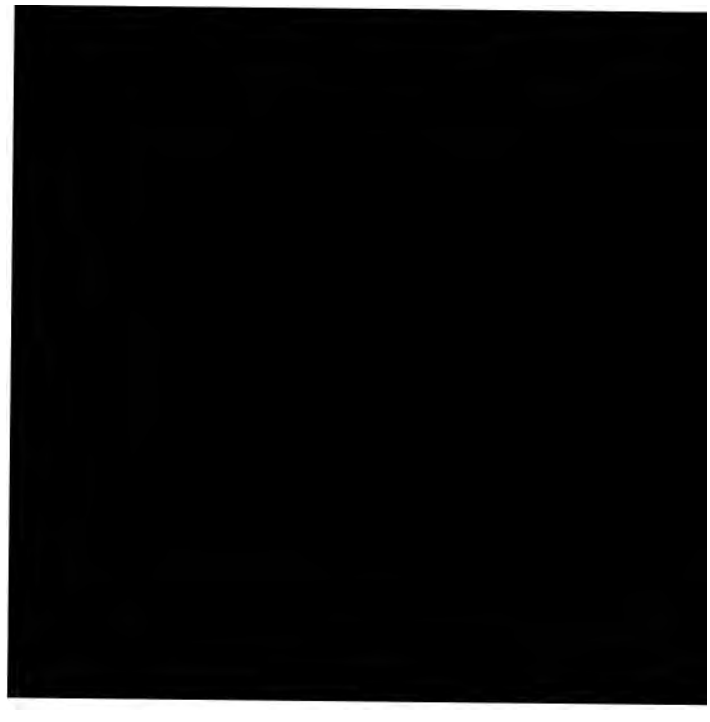
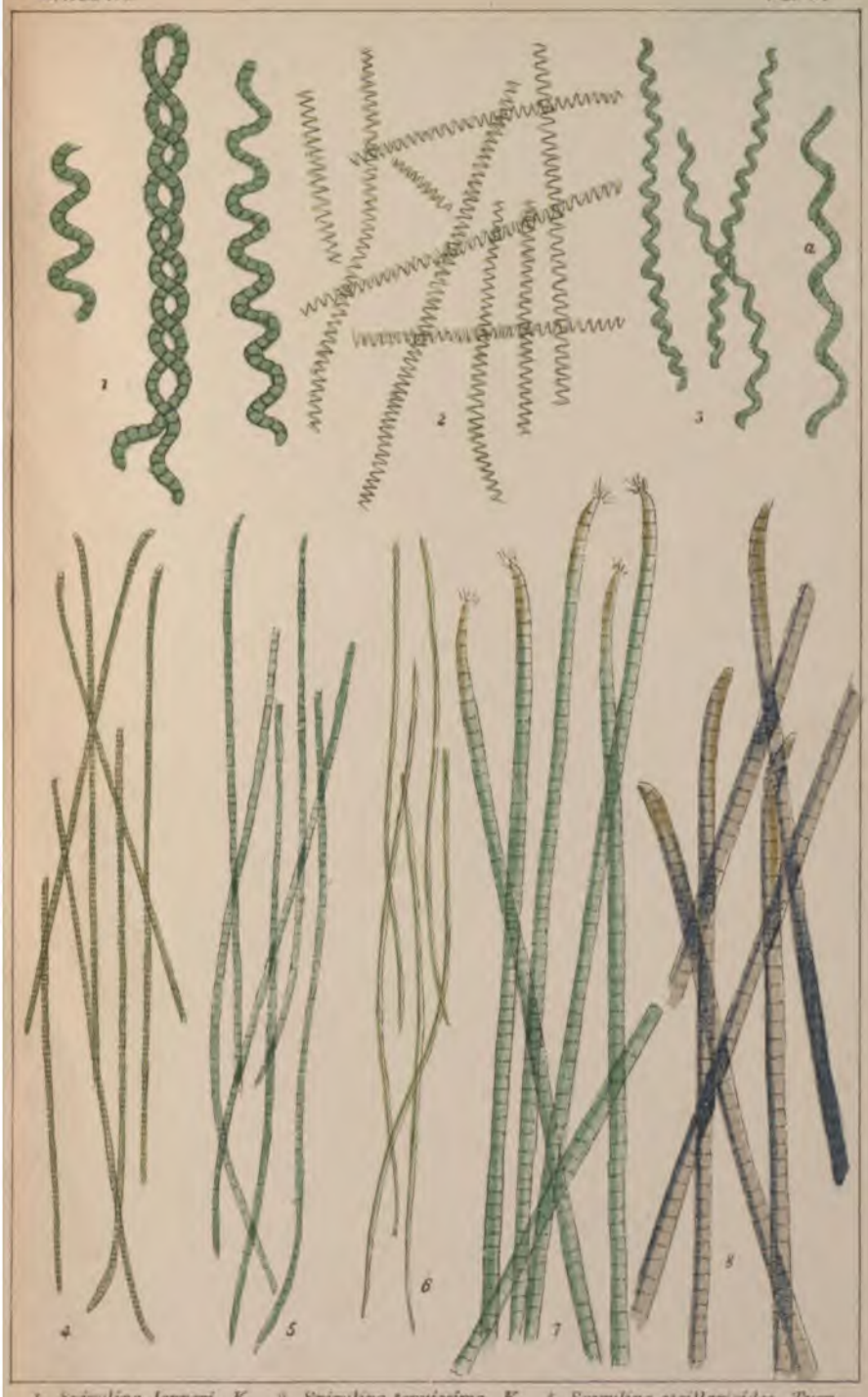
...haena Ralfsii. (Kutz.) 2. *Aphanizomenon flos-aquæ. Morr.* 3. *Sphærozyga Carmichaeli. Harv.*
...herozyga Broomei. (Thur.) 5. *Sphærozyga Jacobi. Ralfs.* 6. *Sphærozyga Moureana. Ralfs.*
...yga elastica. (Ralfs.) 8. *Sphærozyga leptosperma. Ralfs.* 9. *Sphærozyga Berkeleyana. Thwaites*

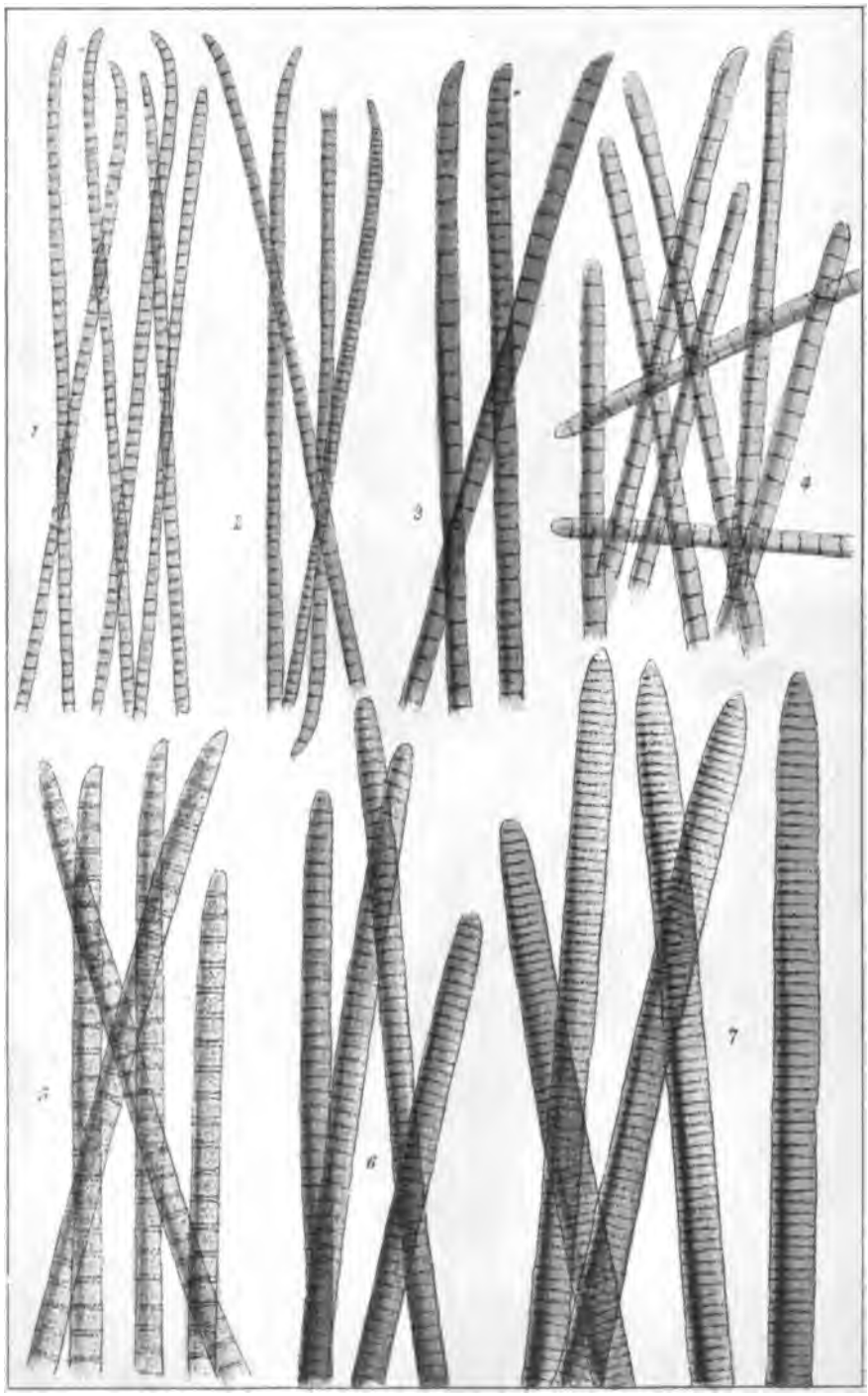


1. Cylindrospermum macrospermum. Desm. 2. Cylindrospermum catenatum. Ralfs. 3. Nodularia litorea. Thur. 4. Nodularia Harveyana. Thur.

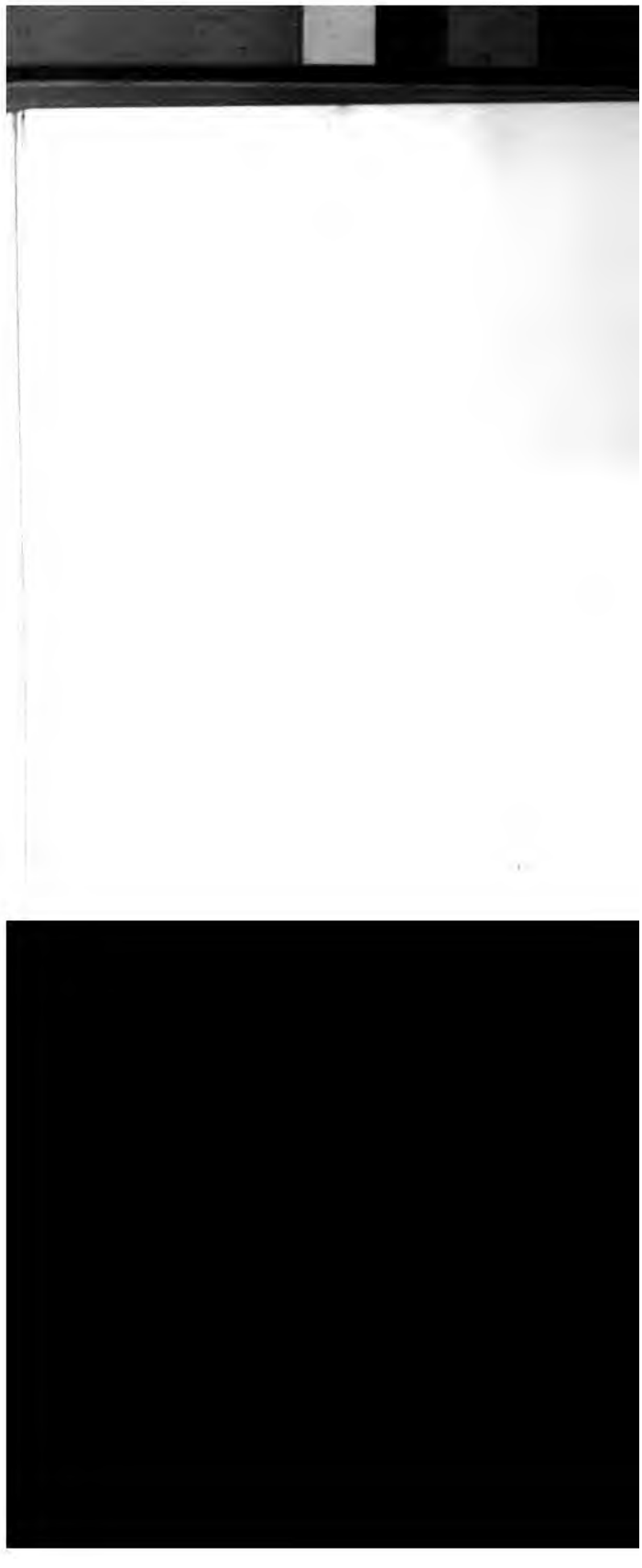


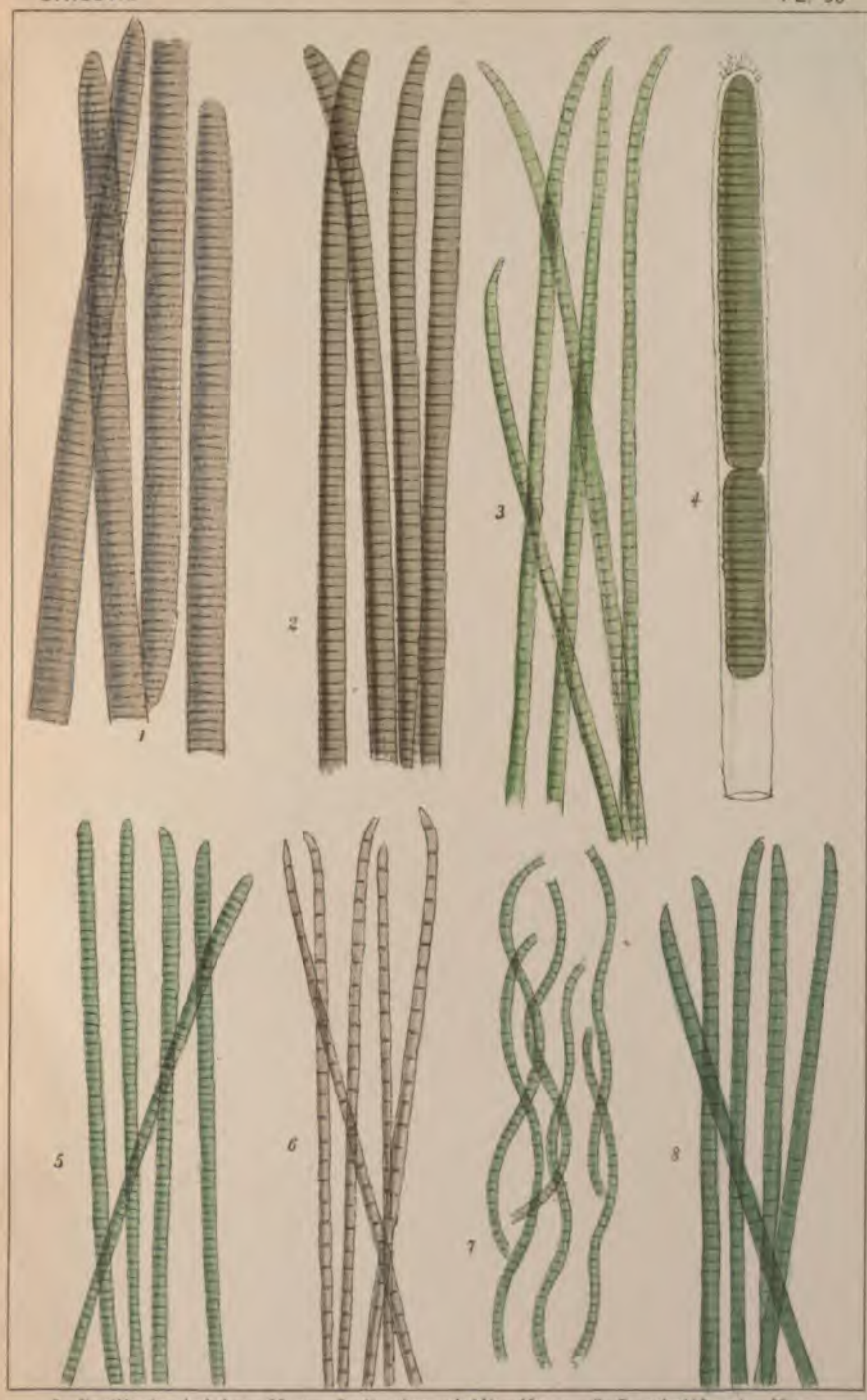


1. Spirulina Jenneri. K. 2. Spirulina tenuissima. K. 3. Spirulina oscillarioides. Turp. 4. Oscillaria tenerrima. K. 5. O. leptotricha. K. 6. variety, splendida. Grev. 7. O. subfusca. Vauch. 8. O. tenuis. Ag.



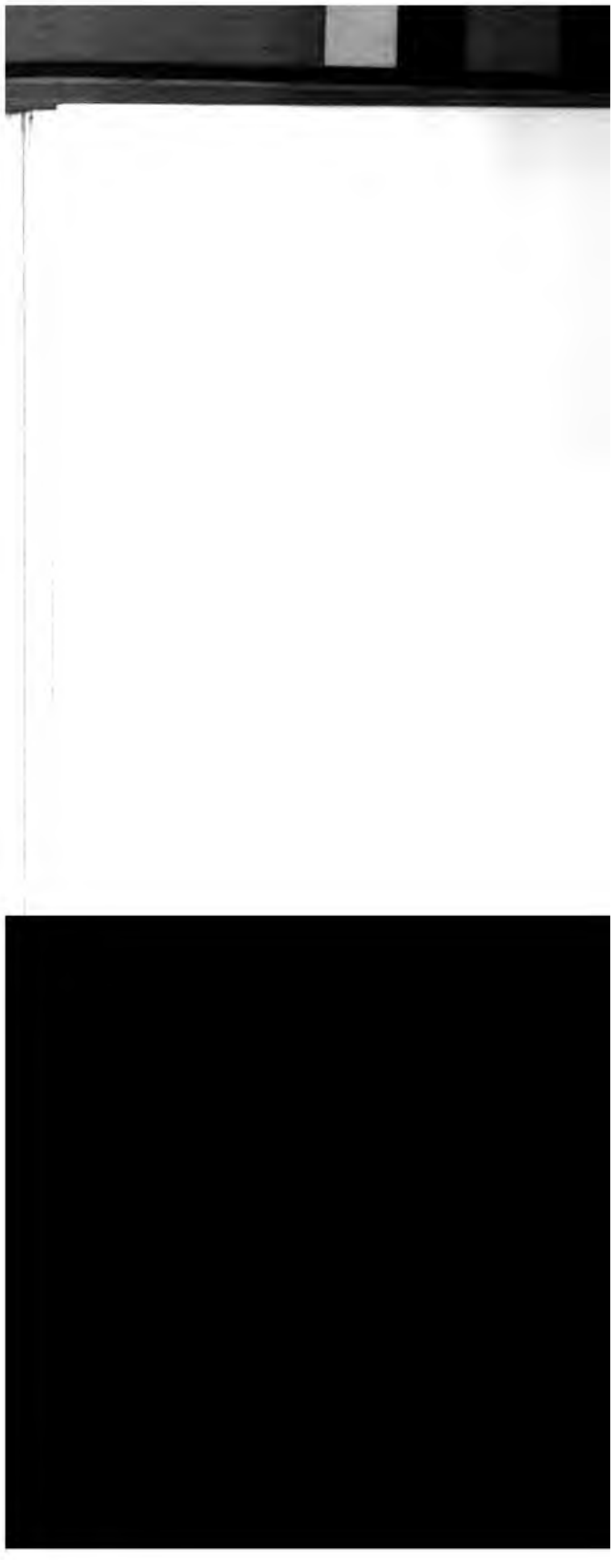
1. Oscillaria tenuis, var. viridis. 2. O. antliaria. Jurg. 3. O. limosa. Ag. 4. O. limosa, var. chalybea. K. 5. O. irrigua. K. 6. O. nigra. Vauch. 7. O. Frolichii. Kutz



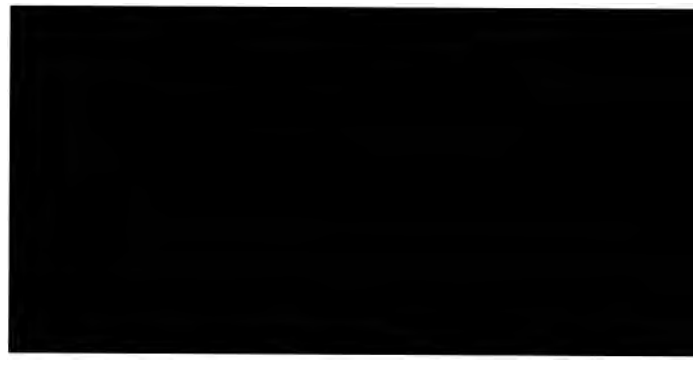


1. Oscillaria chalybea. Mert. 2. O. nigro-viridis. Harv. 3. O. subuliformis. Harv. 4. O. insignis. Harv. 5. O. ærugescēns. Drum. 6. O. violacea. Johnst. 7. O. spiralis. Carm. 8. O. muscorum. Carm.

1. Microcoleus gracilis. Hass. 2. Microcoleus terrestris. Desm.



1. Microcoleus chthonoplastes. Thur. 2. Inactis Cresswellii. Thur.
3. Inactis tinctoria. Thur.



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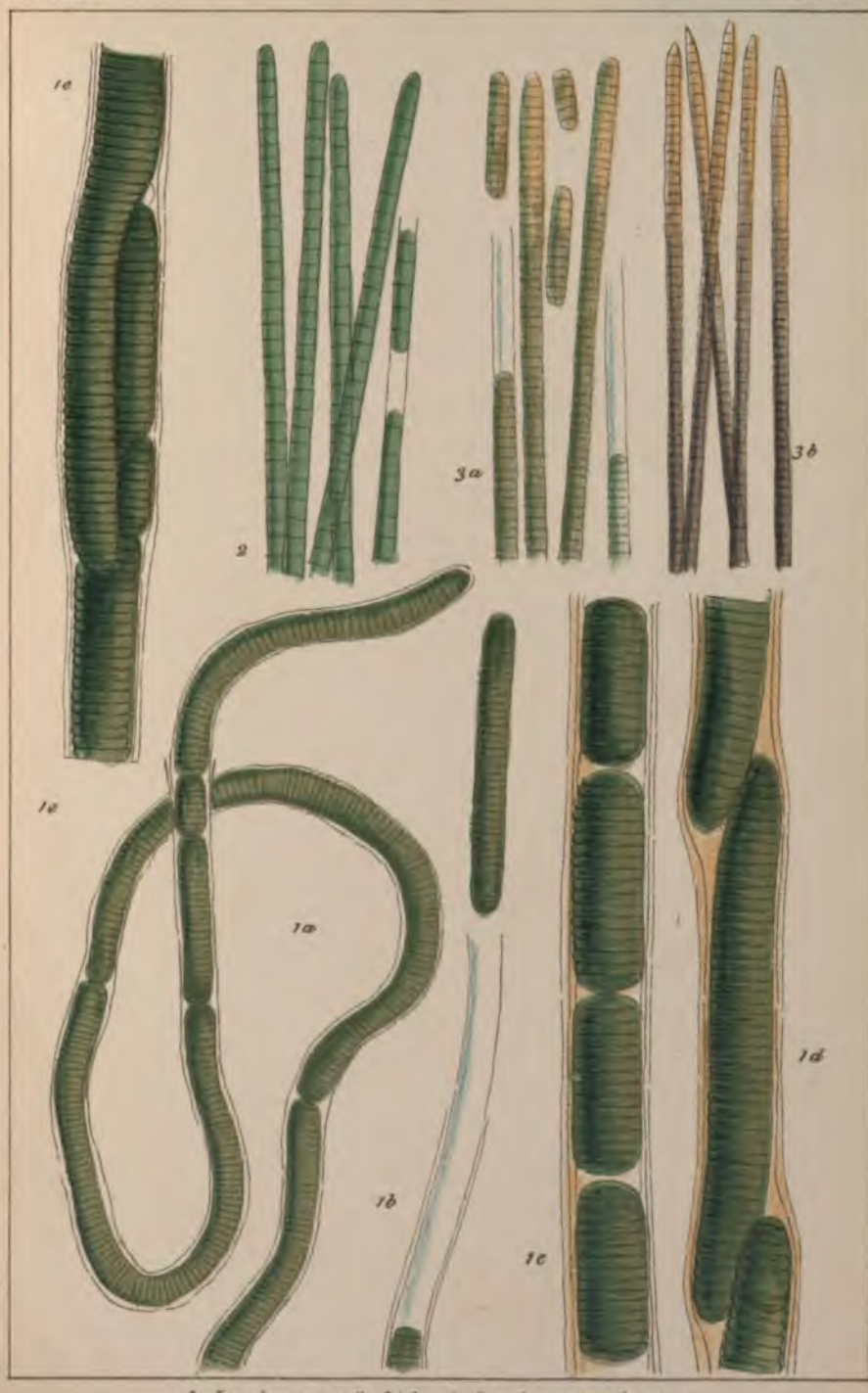
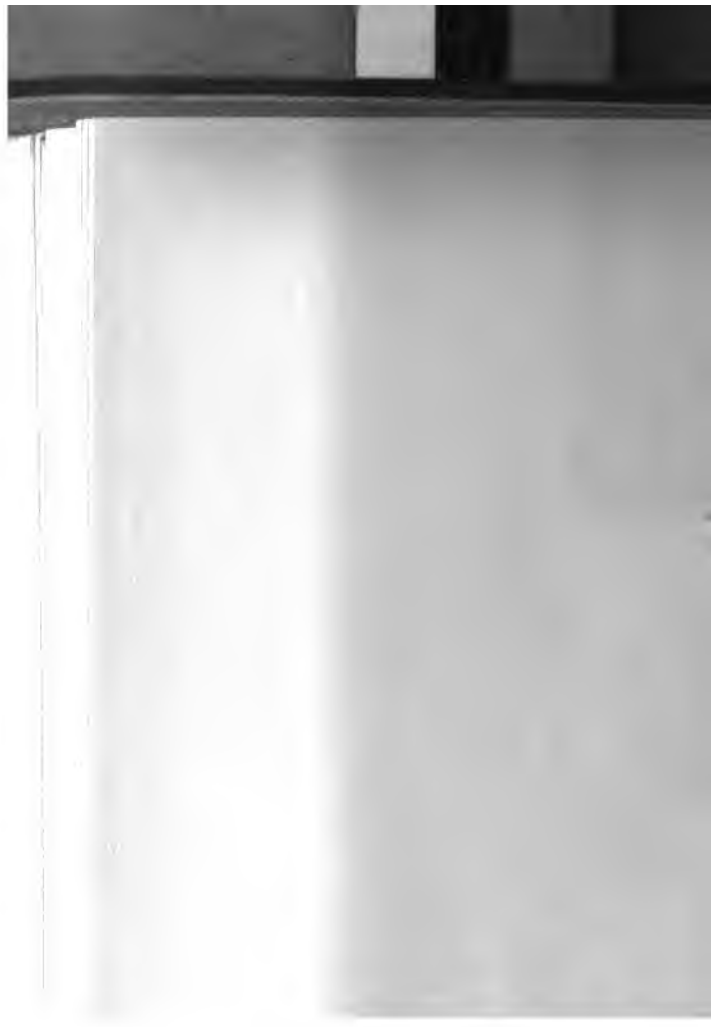
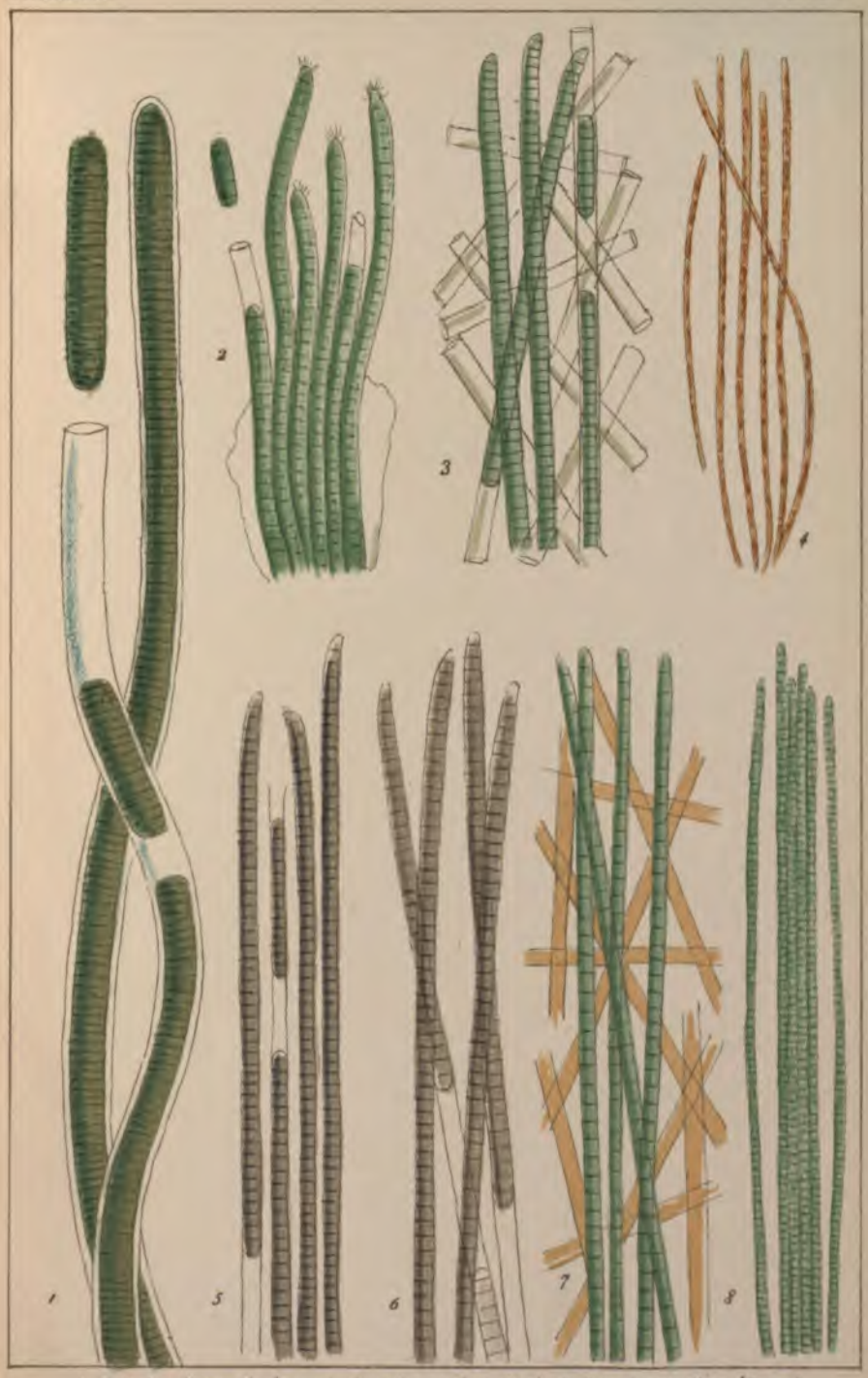
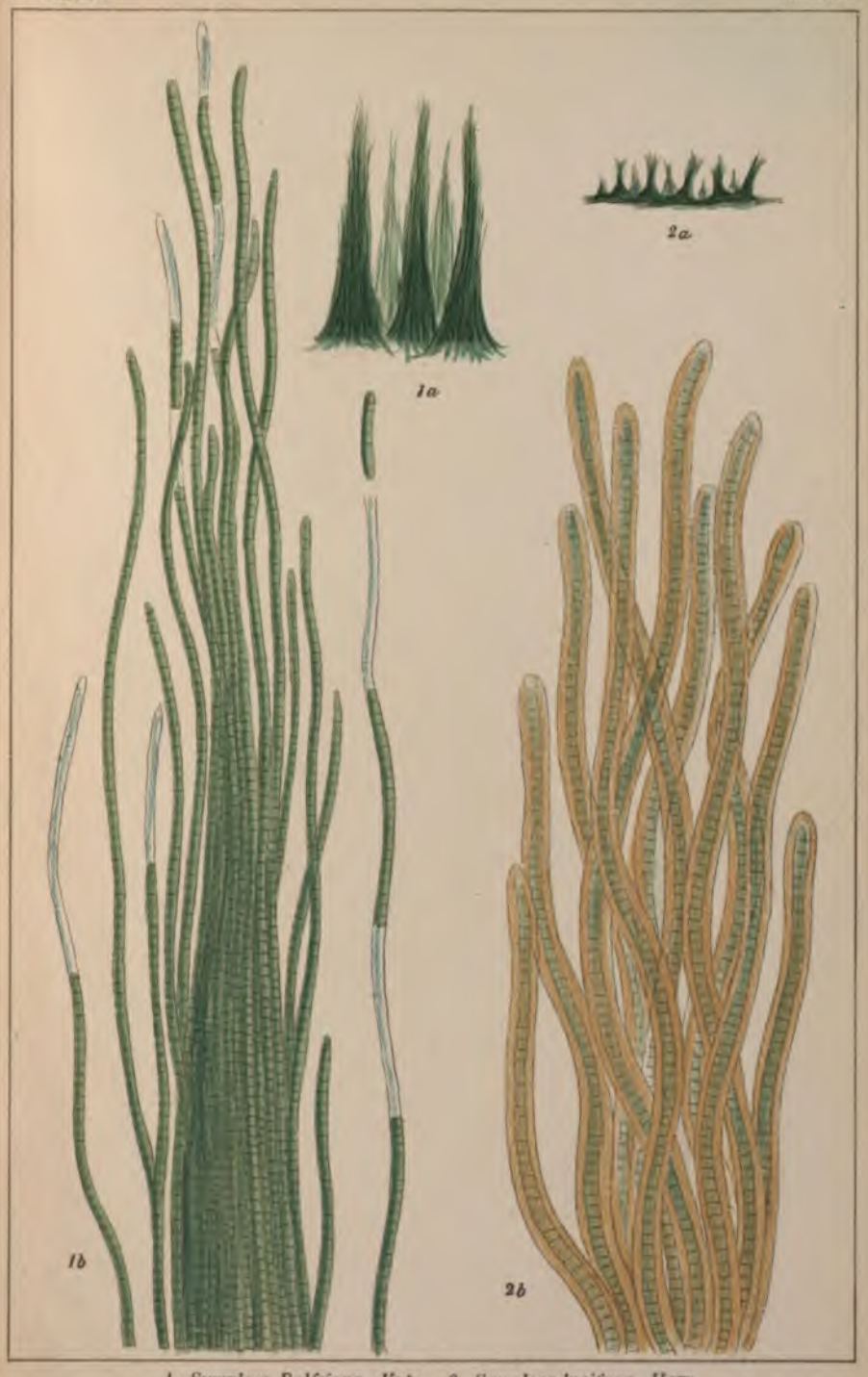


1. Lyngbya æstuarii. Lieb. 2. Lyngbya rupestris. Ag.
3. a. b. Lyngbya subfusca. Ag.





1. Lyngbya littoralis. (Carm.) Lyngbya corium. (Ag.) 3. Lyngbya turfosa. (Carm.)
4. Lyngbya ochracea. Thur. 5. Lyngbya vulgaris. K. 6. Lyngbya vulgaris. var. myochroa.
7. Lyngbya papyrina. K. 8. Lyngbya inundata. K.



1. Symploca Ralfsiana. Kutz. 2. Symploca lucifuga. Harv.

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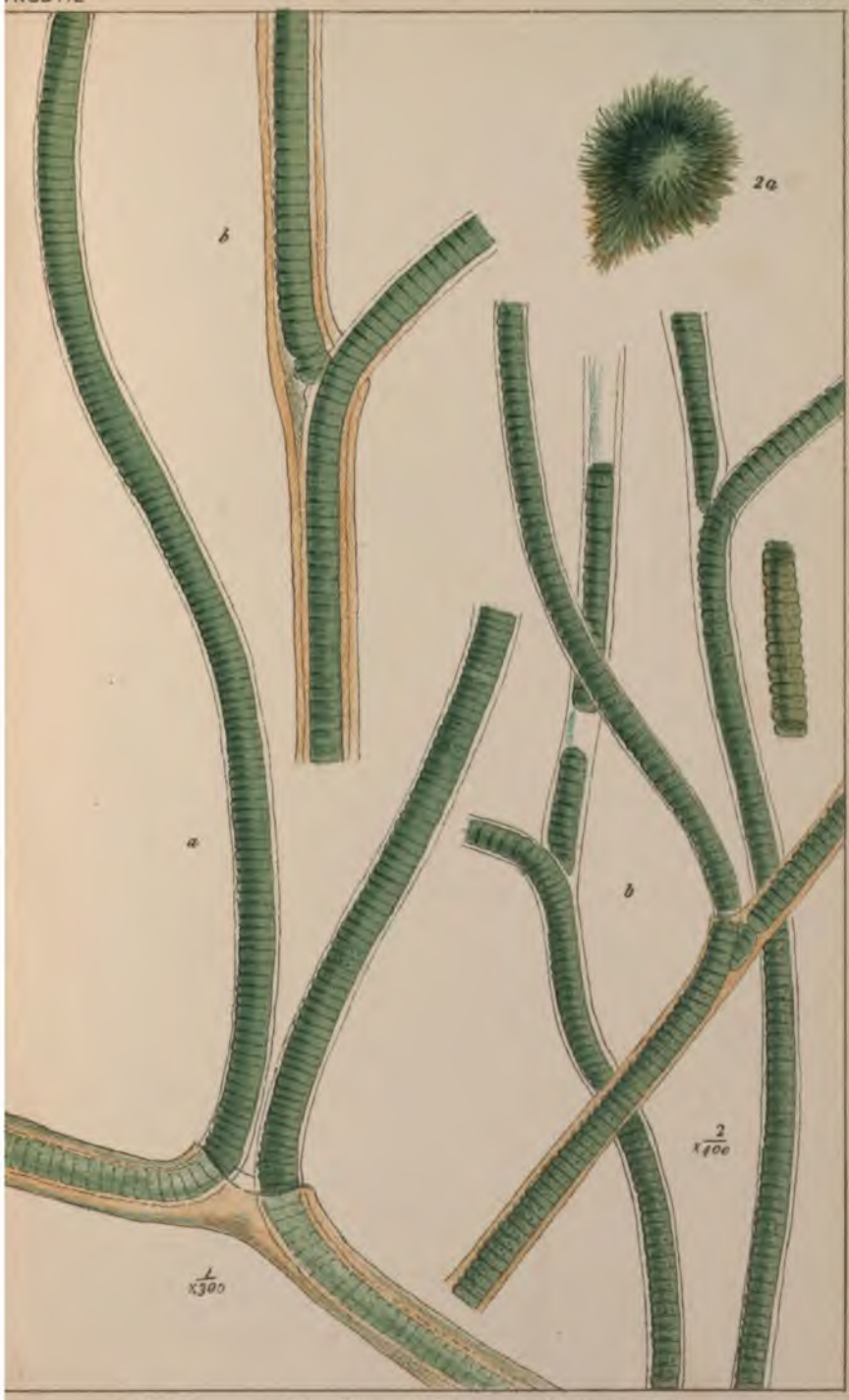
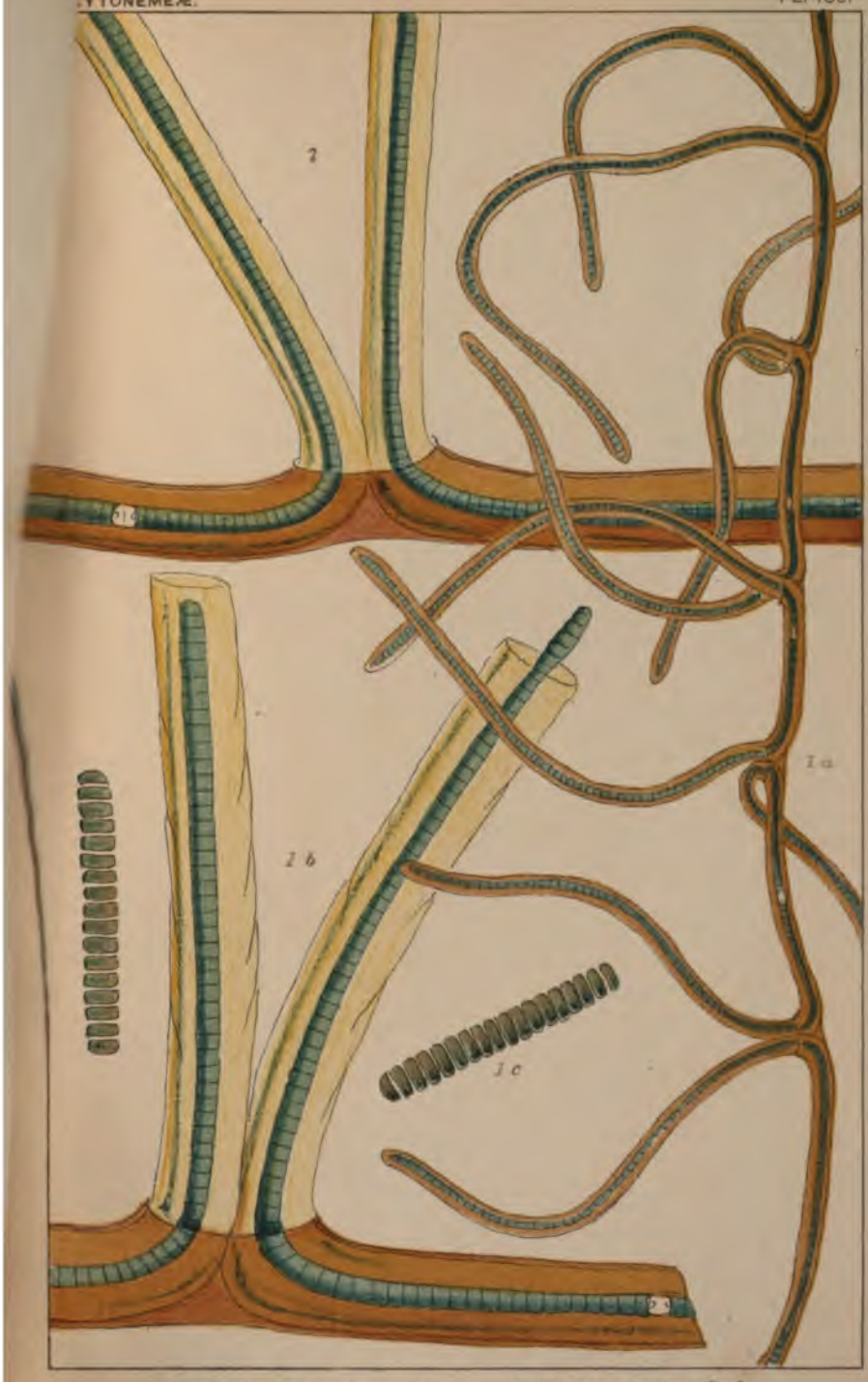
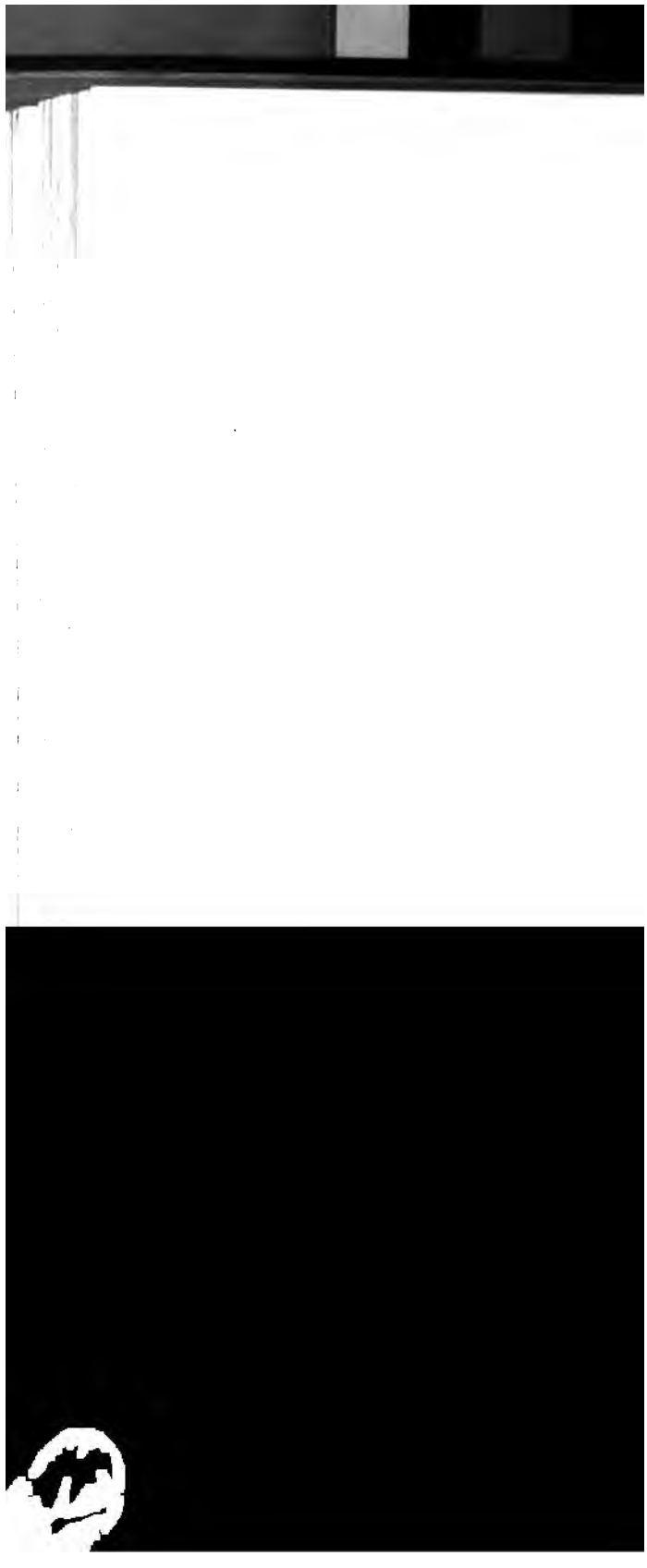
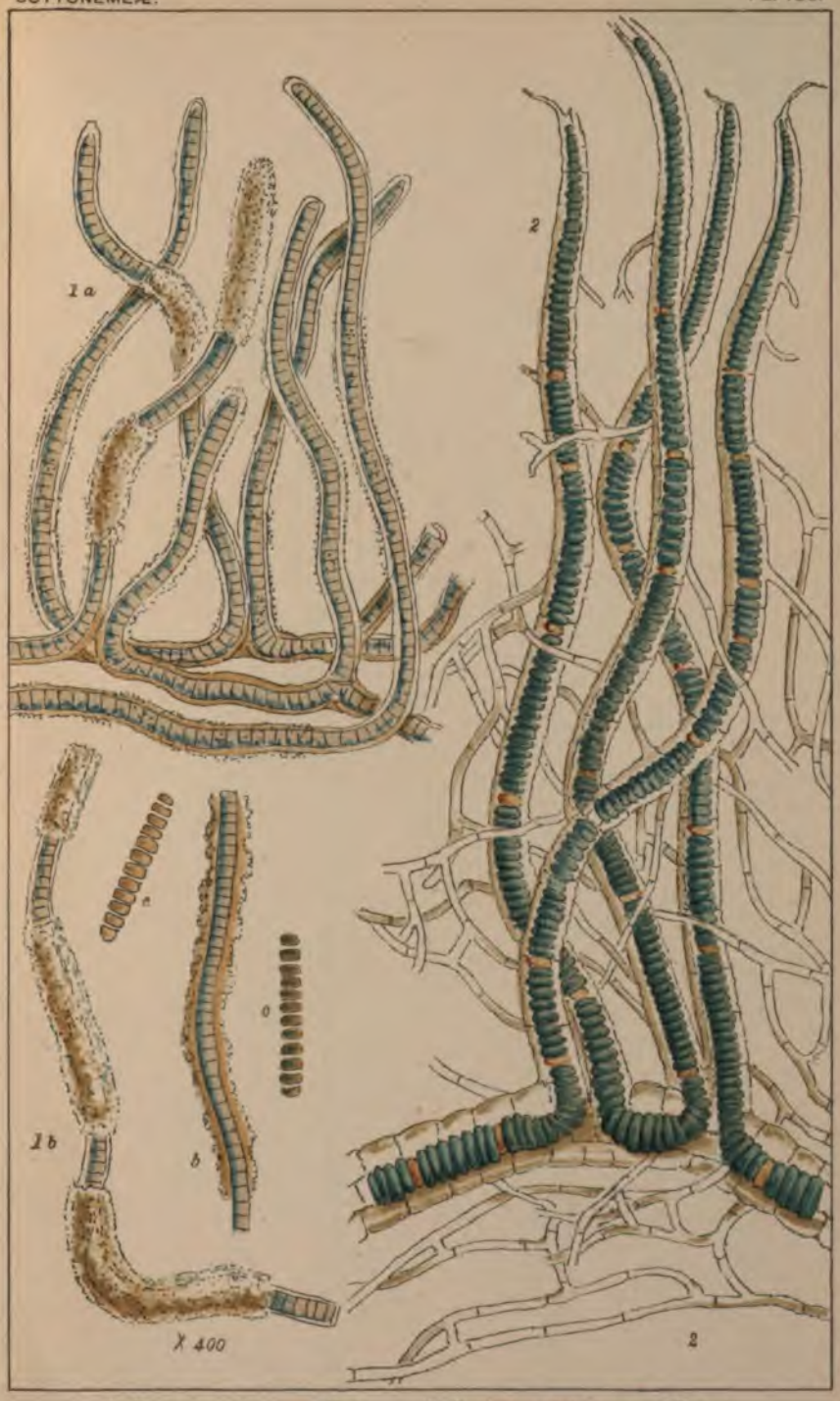


1. Plectonema mirabile. Thur. 2. Plectonema Kirchneri. Cooke.



1. *Scytonema myochroum. Ag.* 2. *Scytonema natans. Breb.*





1. Scytonema cinereum. Kutz. *2. Scytonema interruptum (Carm).*

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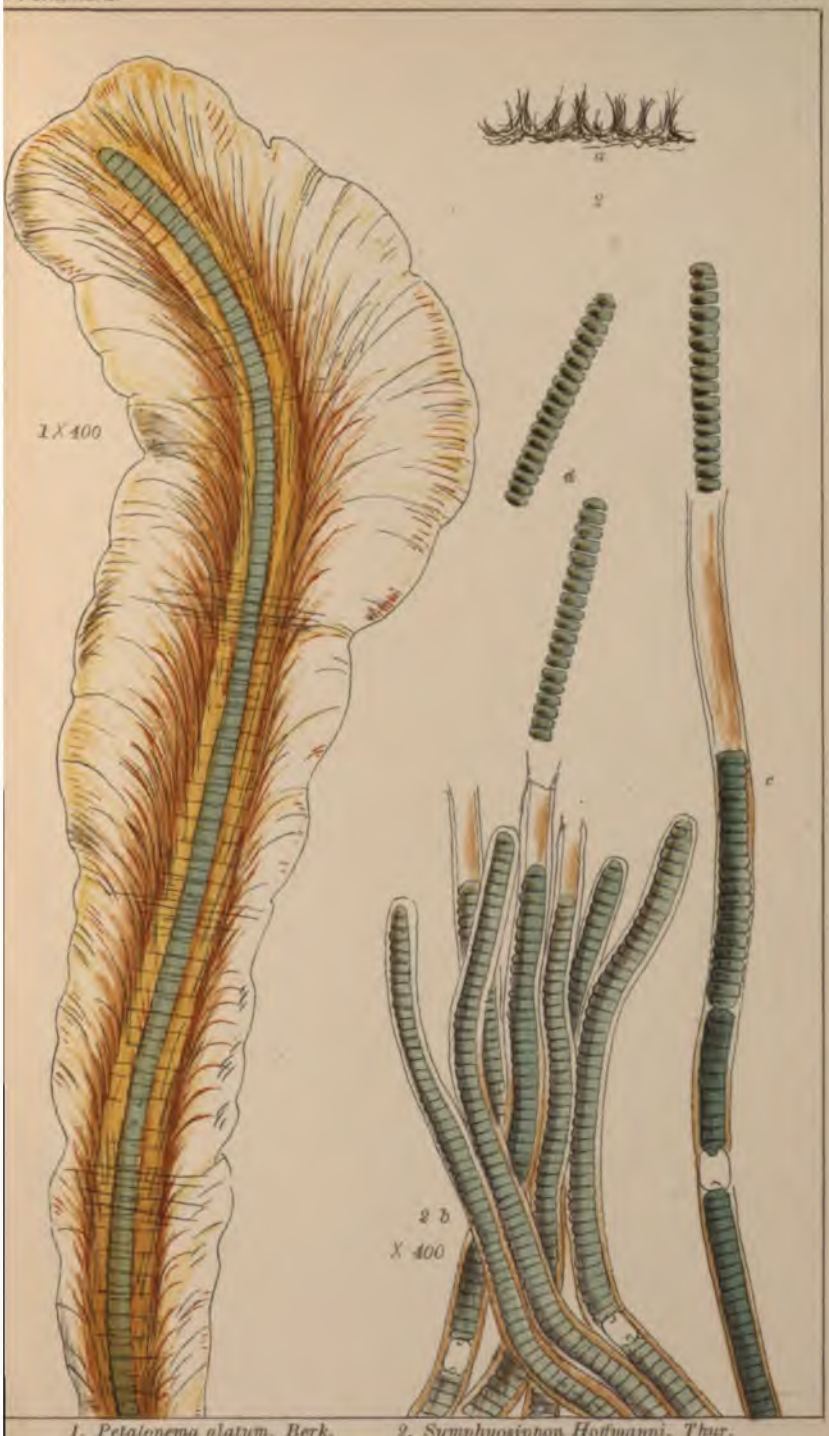
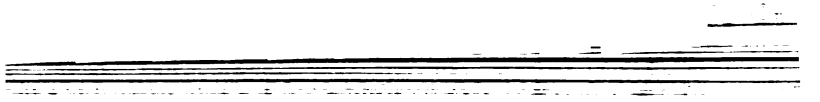
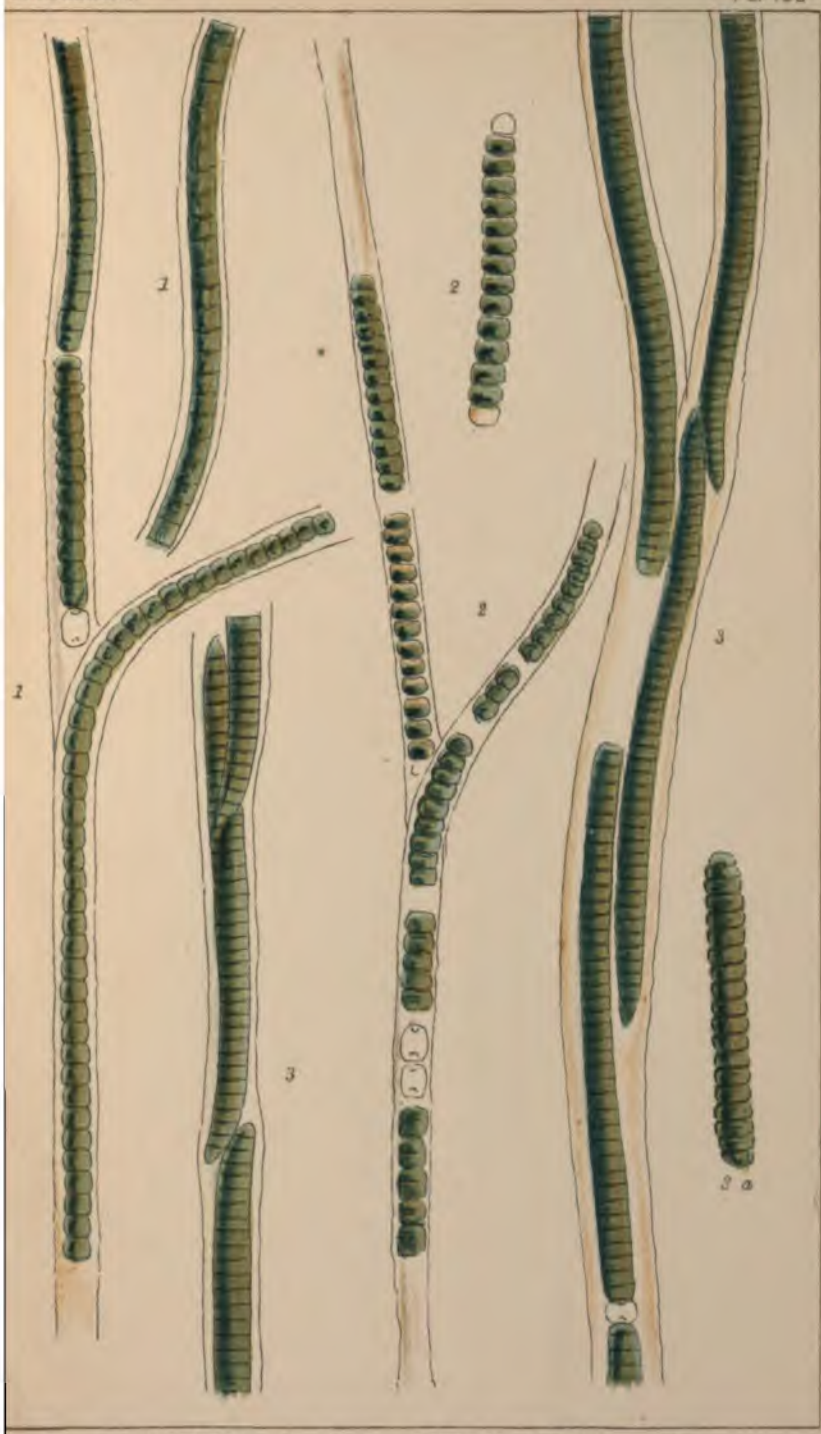
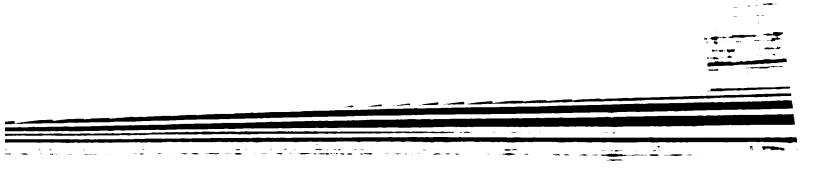


1. Petalonema alatum. Berk. *2. Symphyosiphon Hoffmanni. Thur.*





1. *Tolypothrix flaccida.* (*Ag.*) 2. *Tolypothrix distorta.* Kutz.
3. *Tolypothrix cirrhosa* (*Carm.*).



1. Tolypothrix ægagropila. Kutz. *2. Tolypothrix ægagropila, var. pygmæa. Kutz.*
3. Tolypothrix coactilis. Kutz.

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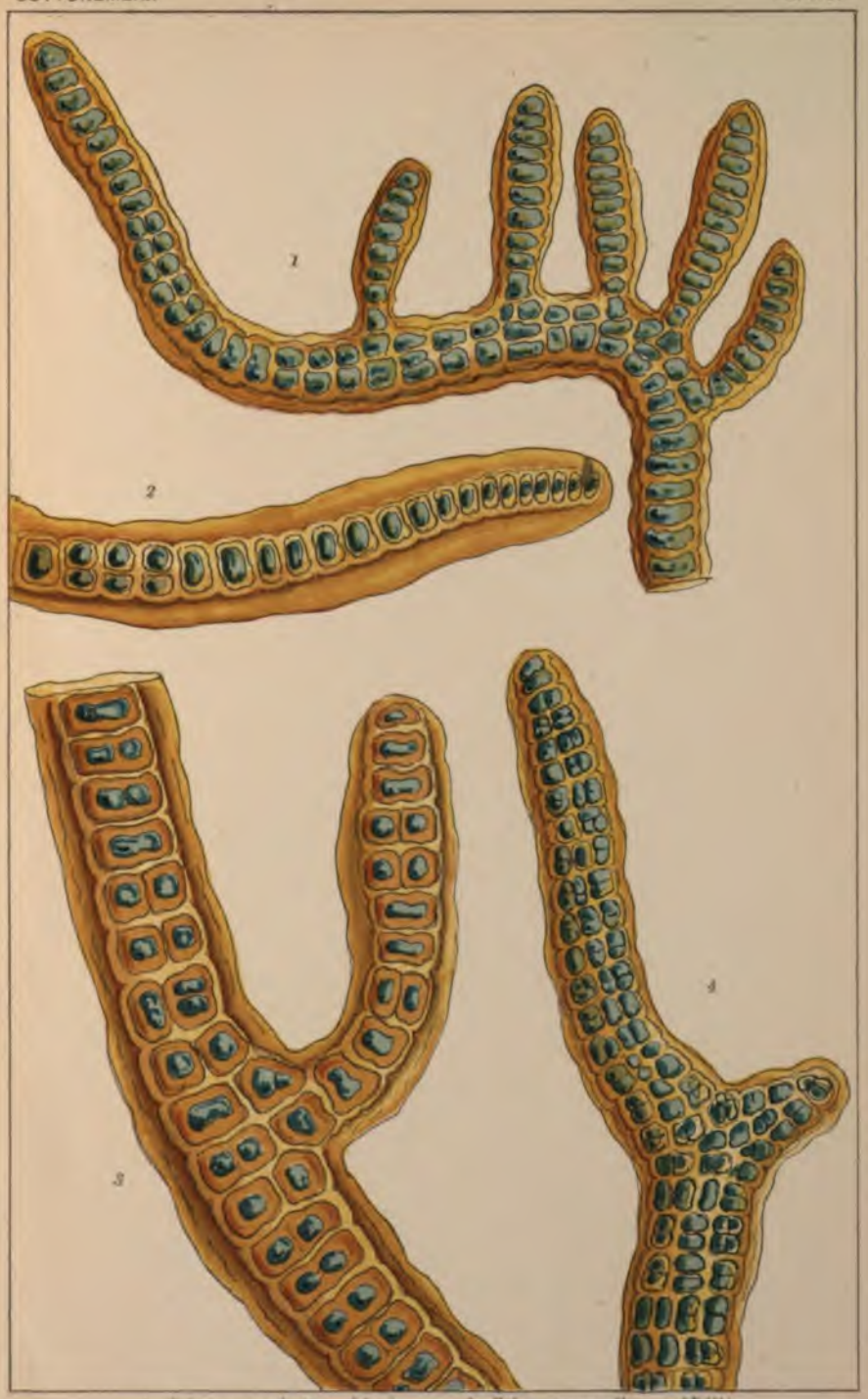
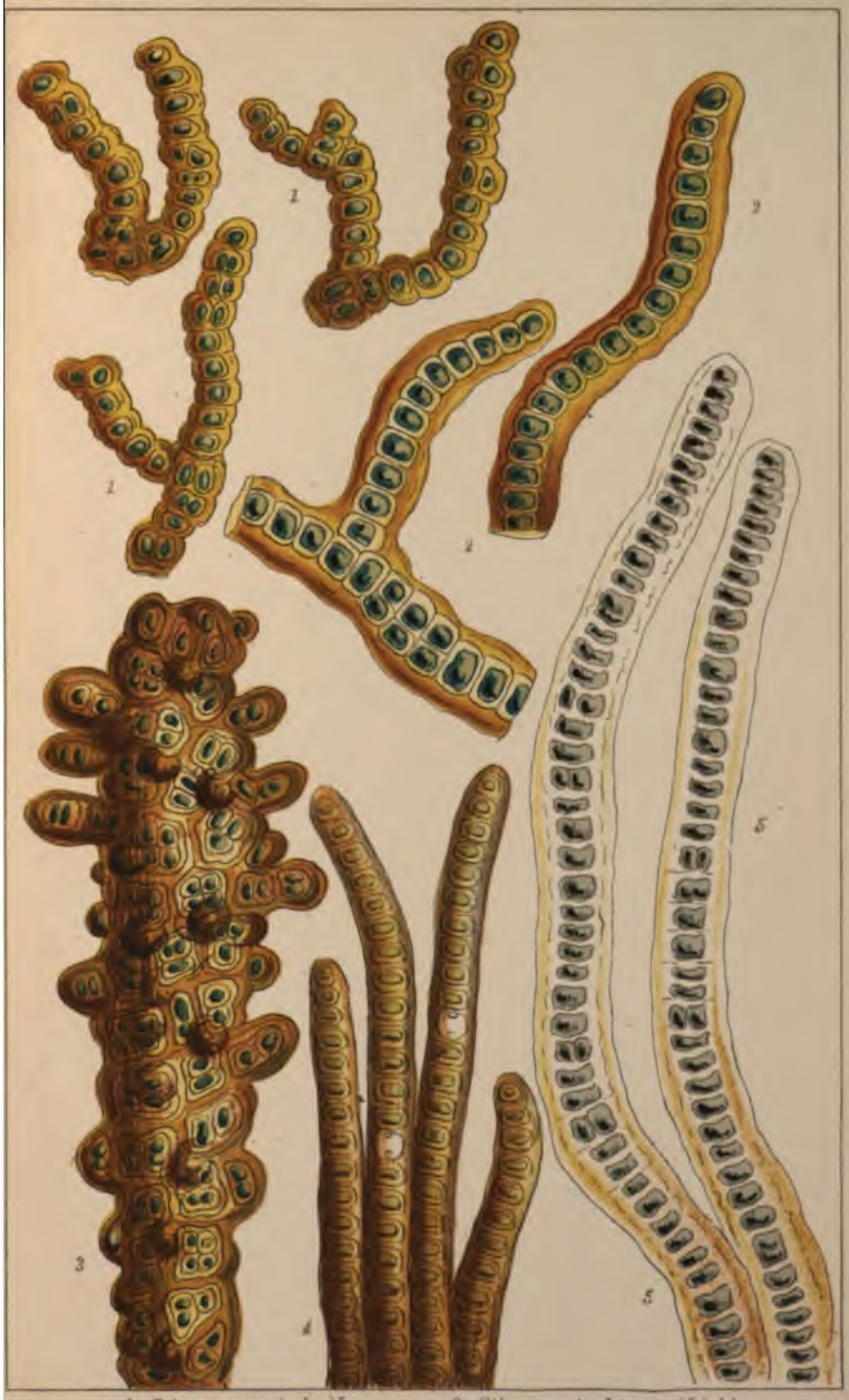
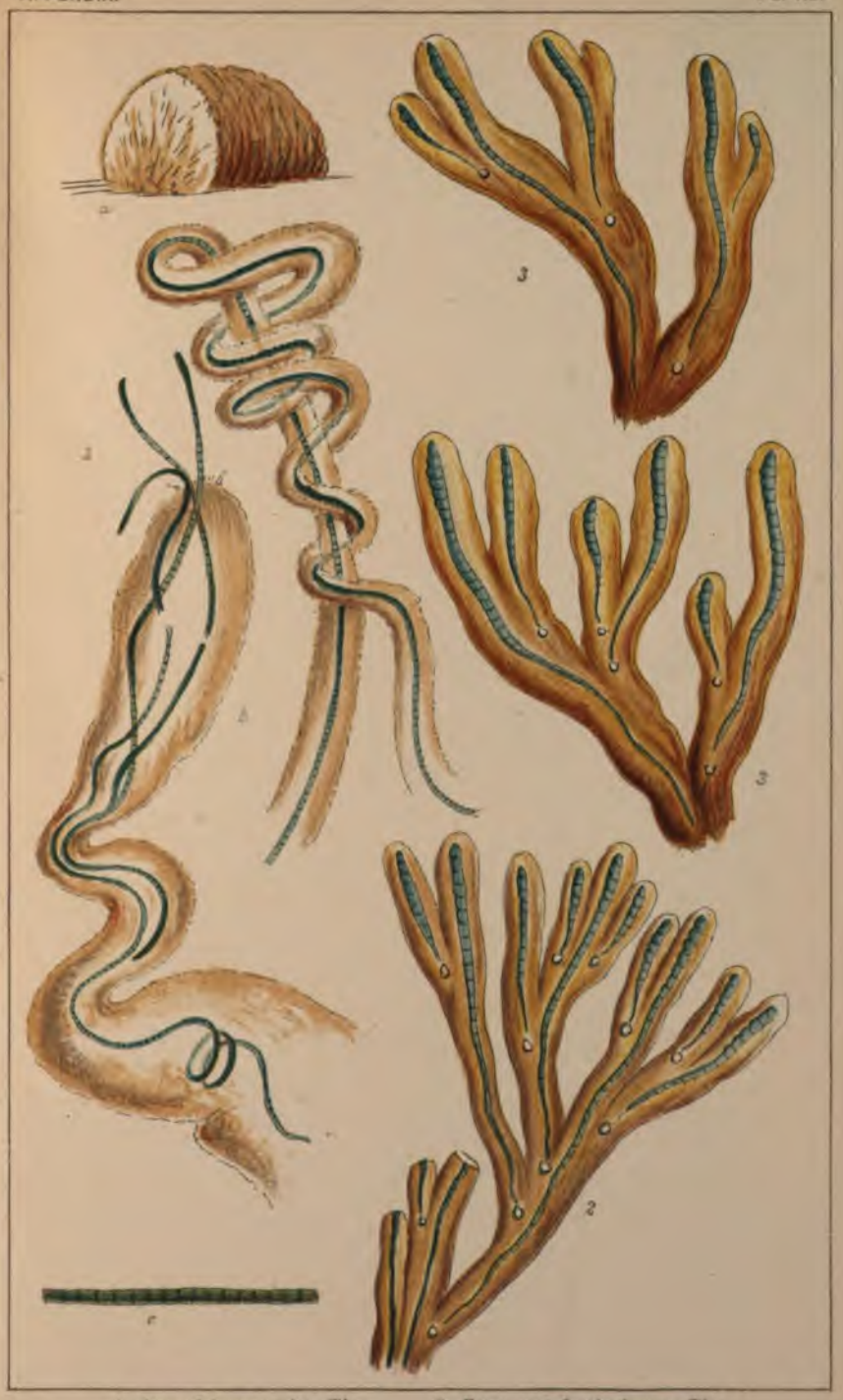


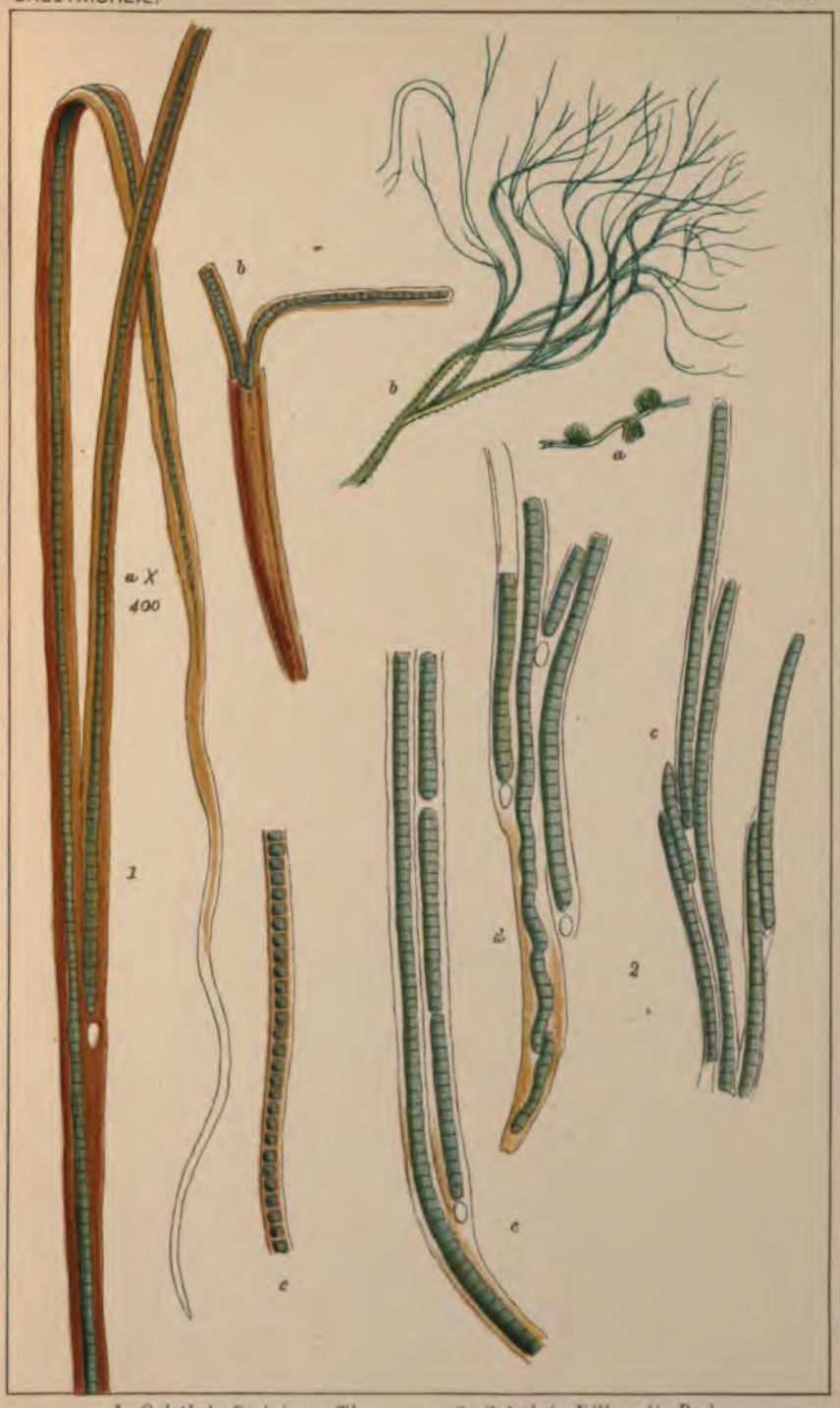
1. *Stigonema minutum* (*Ag.*). 2. *Stigonema ocellatum* (*Dill*).
3. *Stigonema Bouteillei* (*Dreb.*). 4. *Stigonema panniforme* (*Ag.*)



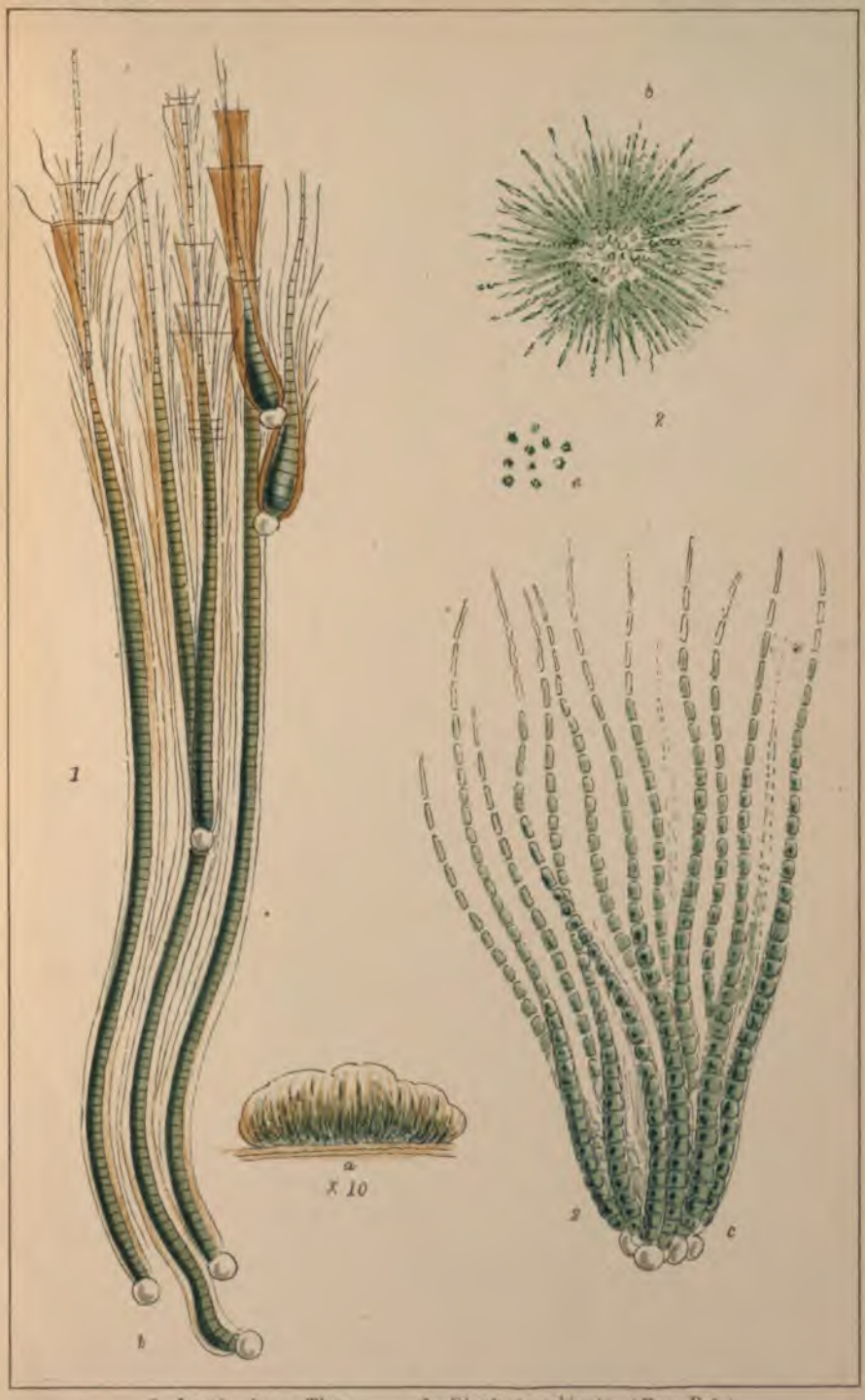
1. Stigonema saxicola Ag. *2. Stigonema turfaceum (Link)*
3. Stigonema mamillosum. Ag. *4. Stigonema compactum. Ag.*
5. Hapalosiphon byssoideus Thur.



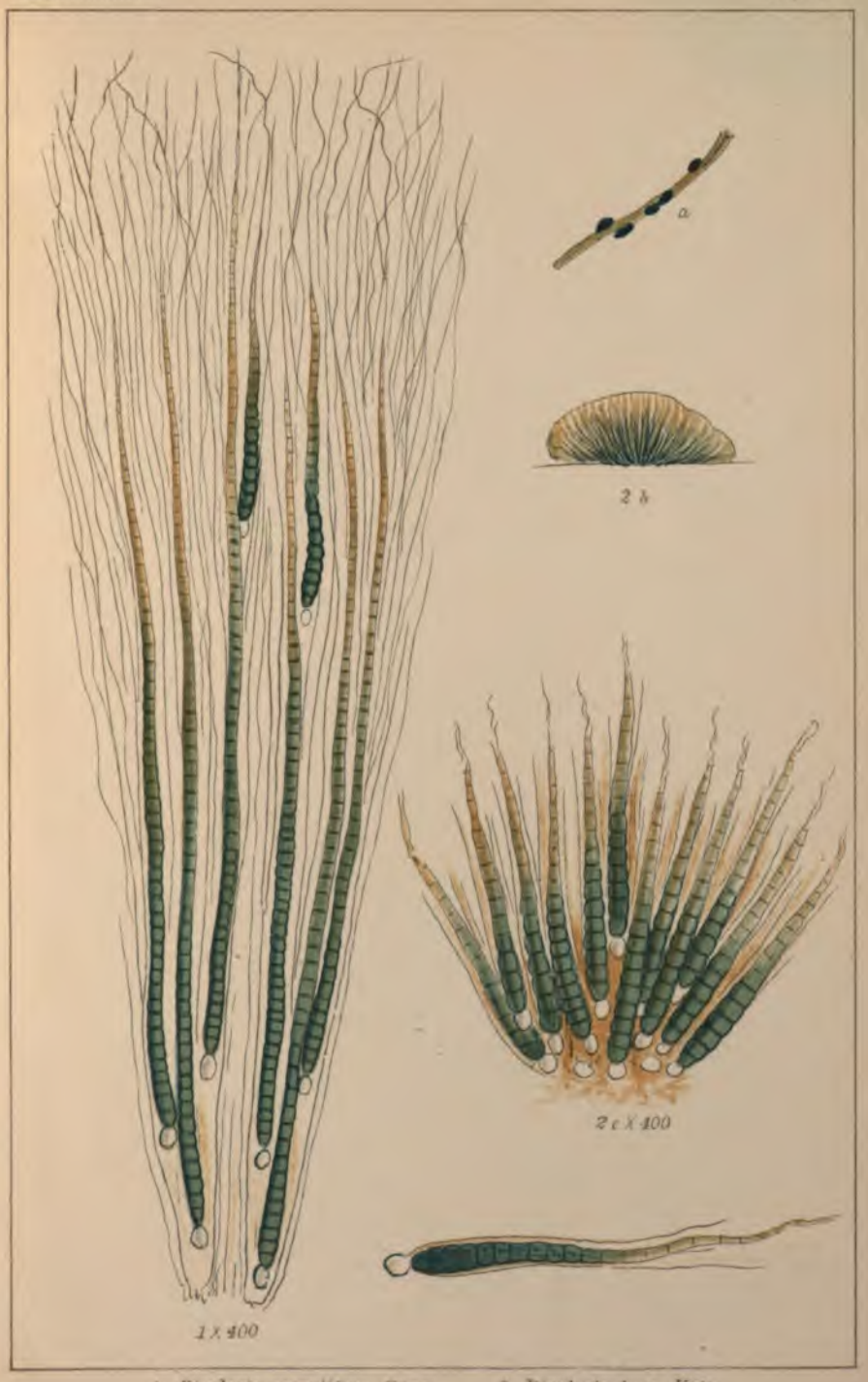
1. Dasygloia amorpha. Thw. *2. Petronema fruticulosum. Thw.*
3. Scytonema crustaceum. Ag.



1. Calothrix Orsiniana. Thur. *2. Calothrix Dillwynii. Berk.*



1. Isactis plana. Thur. *2. Rivularia echinata. (Eng. Bot.)*

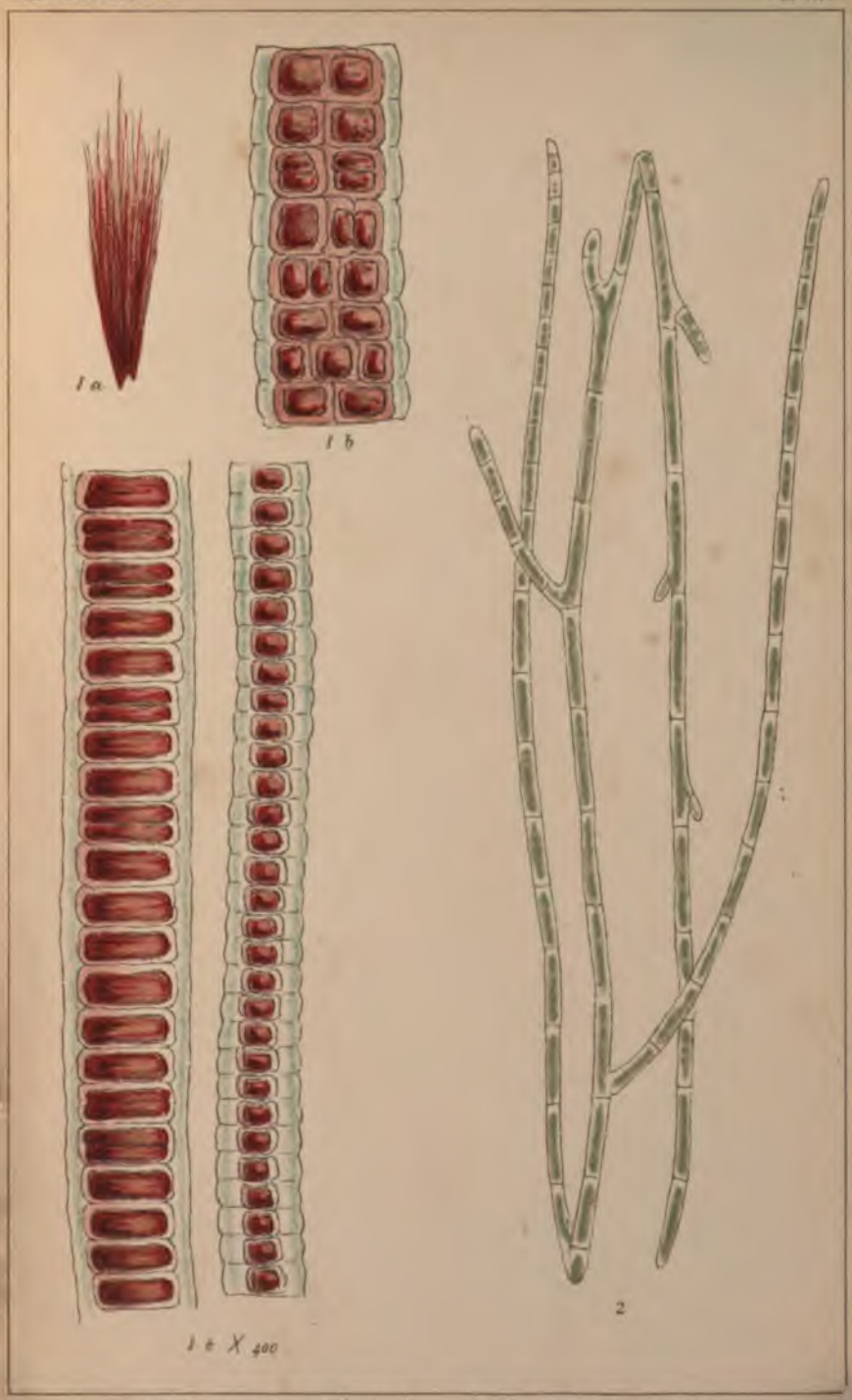


1. *Rivularia granulifera. Carm.* 2. *Rivularia dura. Kutz.*

[redacted]

1. Glæotrichia natans. Thur. *2. Glæotrichia pisum. (Ag.)*
3. Rivularia calcarea. Eng. Bot.

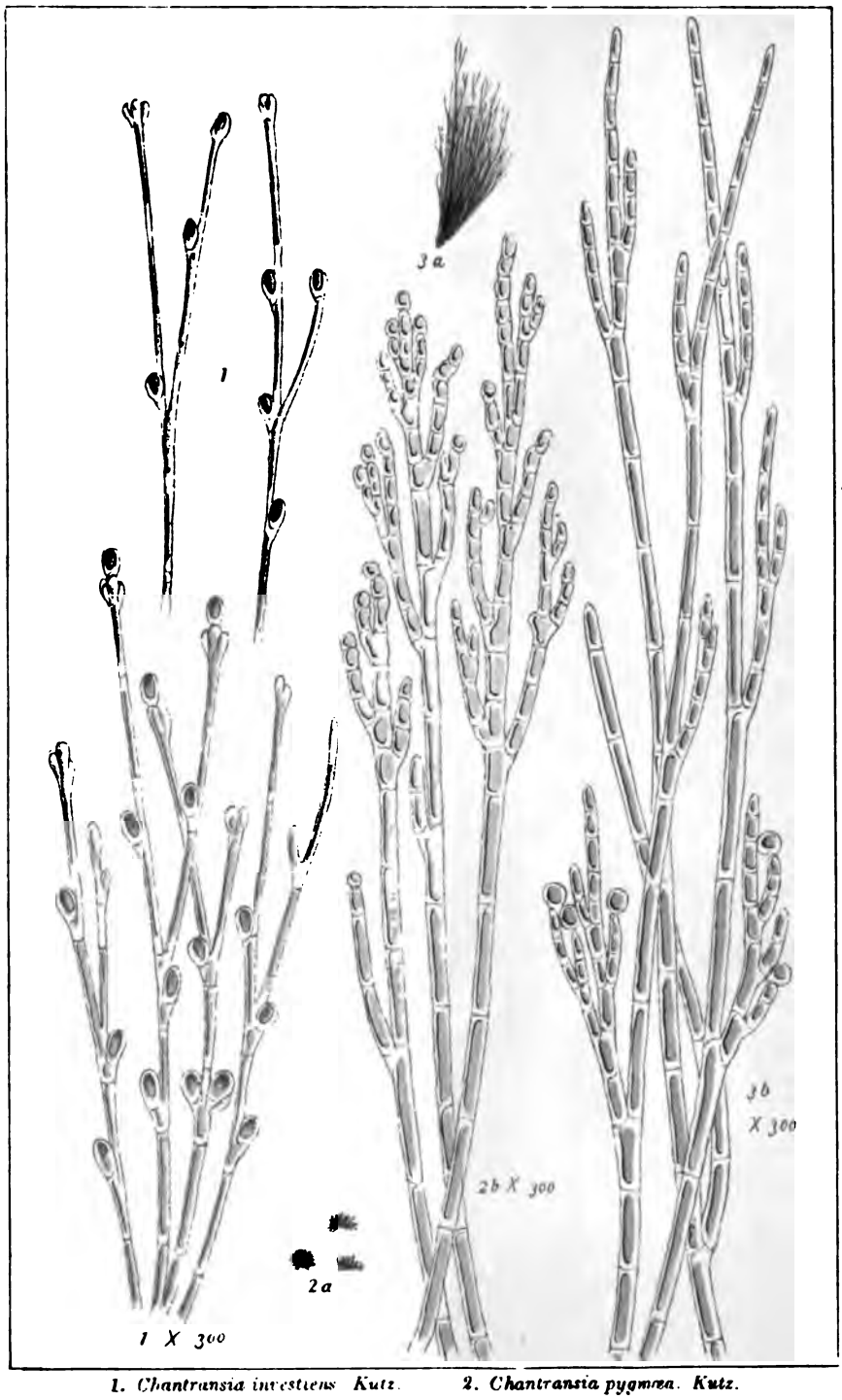
[redacted]



1. *Bangia atropurpurea.* (Dillw.) 2. *Chantransia scotica.* Kutz

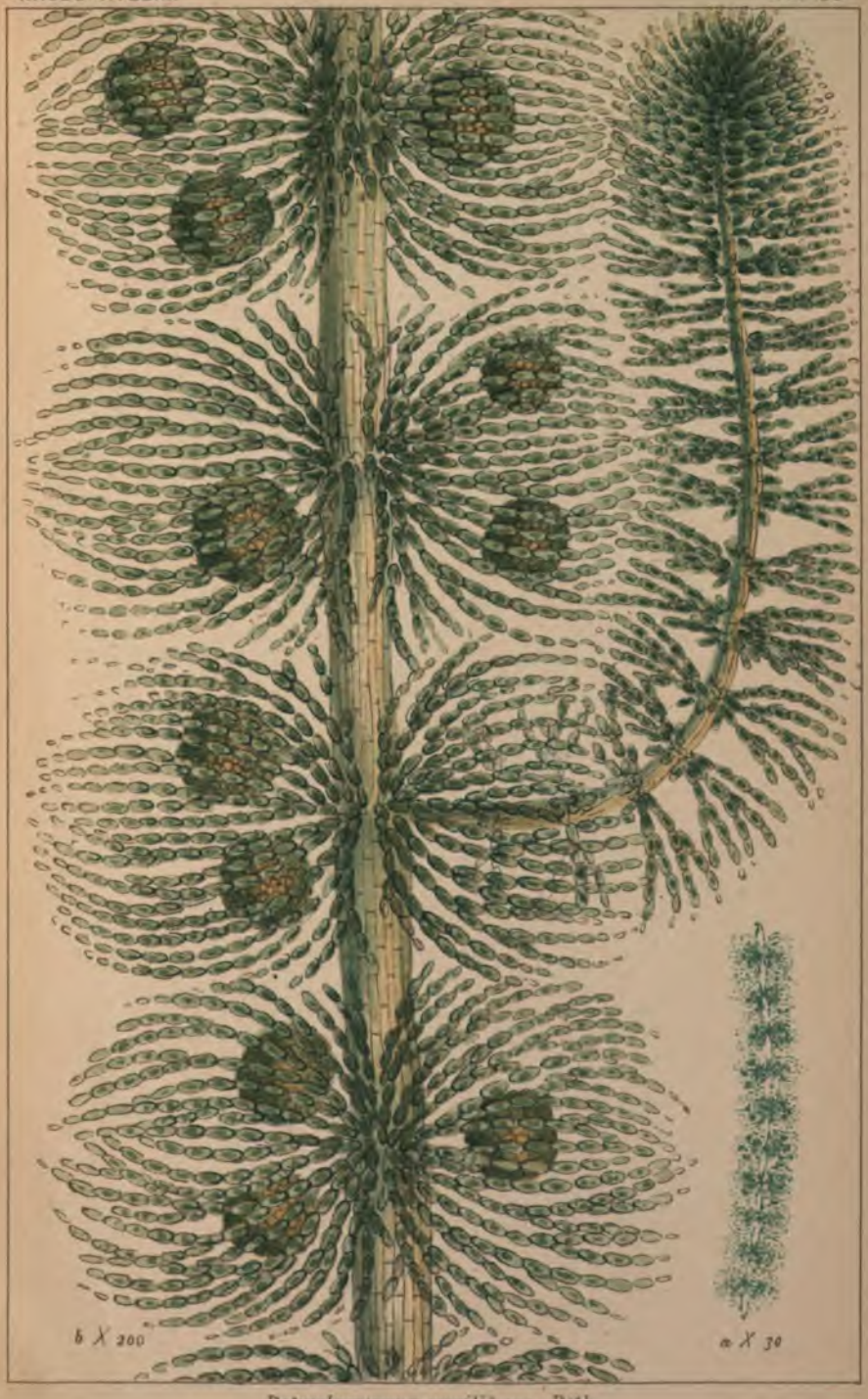
[redacted]

1. Chantransia violacea. D By *2. Chantransia Hermanni. Desv.*

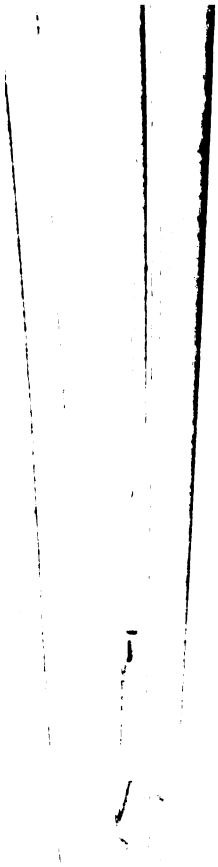


1. *Chantransia investiens* Kutz. 2. *Chantransia pygmæa*. Kutz.
3. *Chantransia chalybea*. Lyngb

[redacted]



Batrachospermum moniliforme. Roth.



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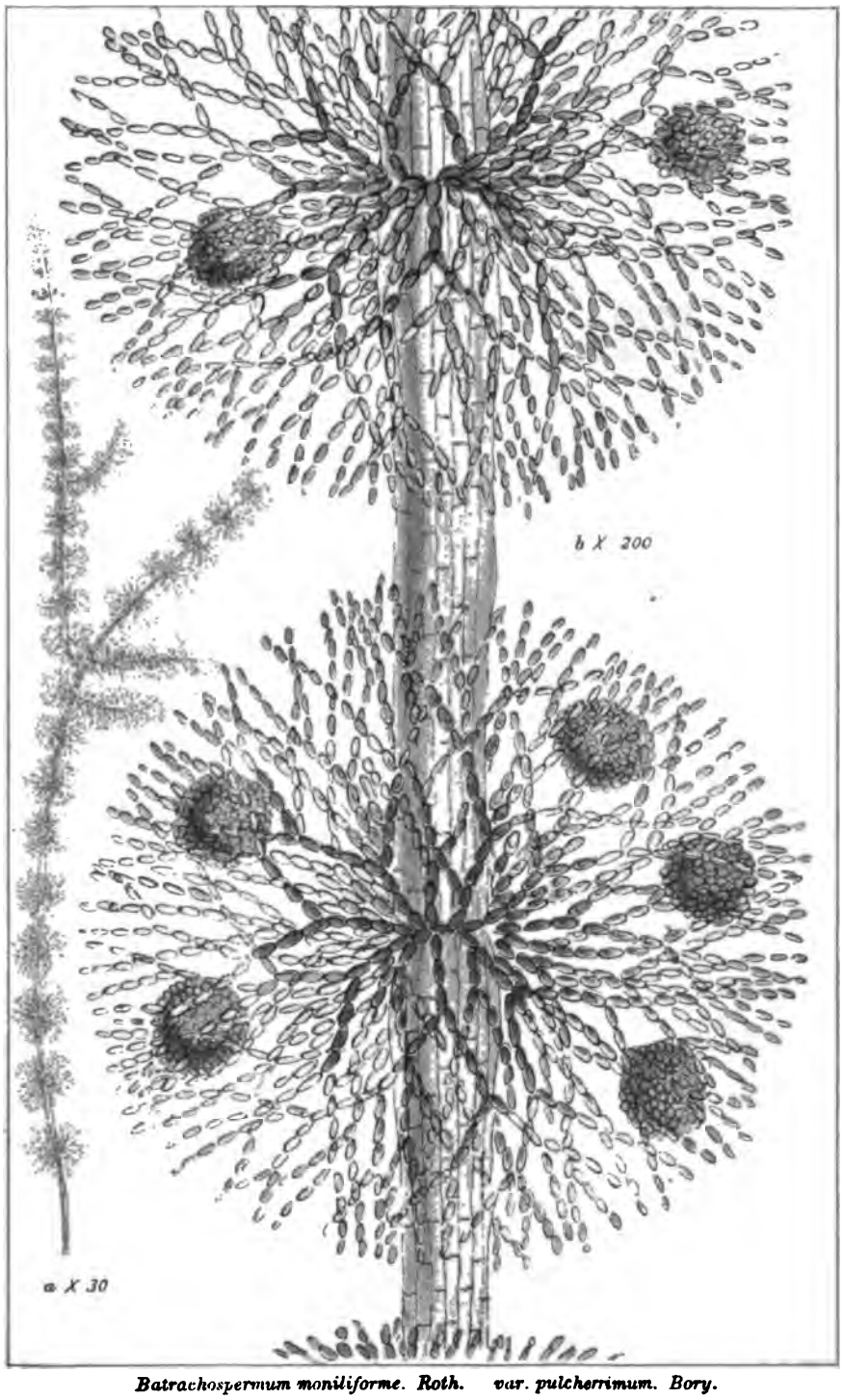

Batrachospermum moniliforme. Roth. var. pulcherrimum. Bory.

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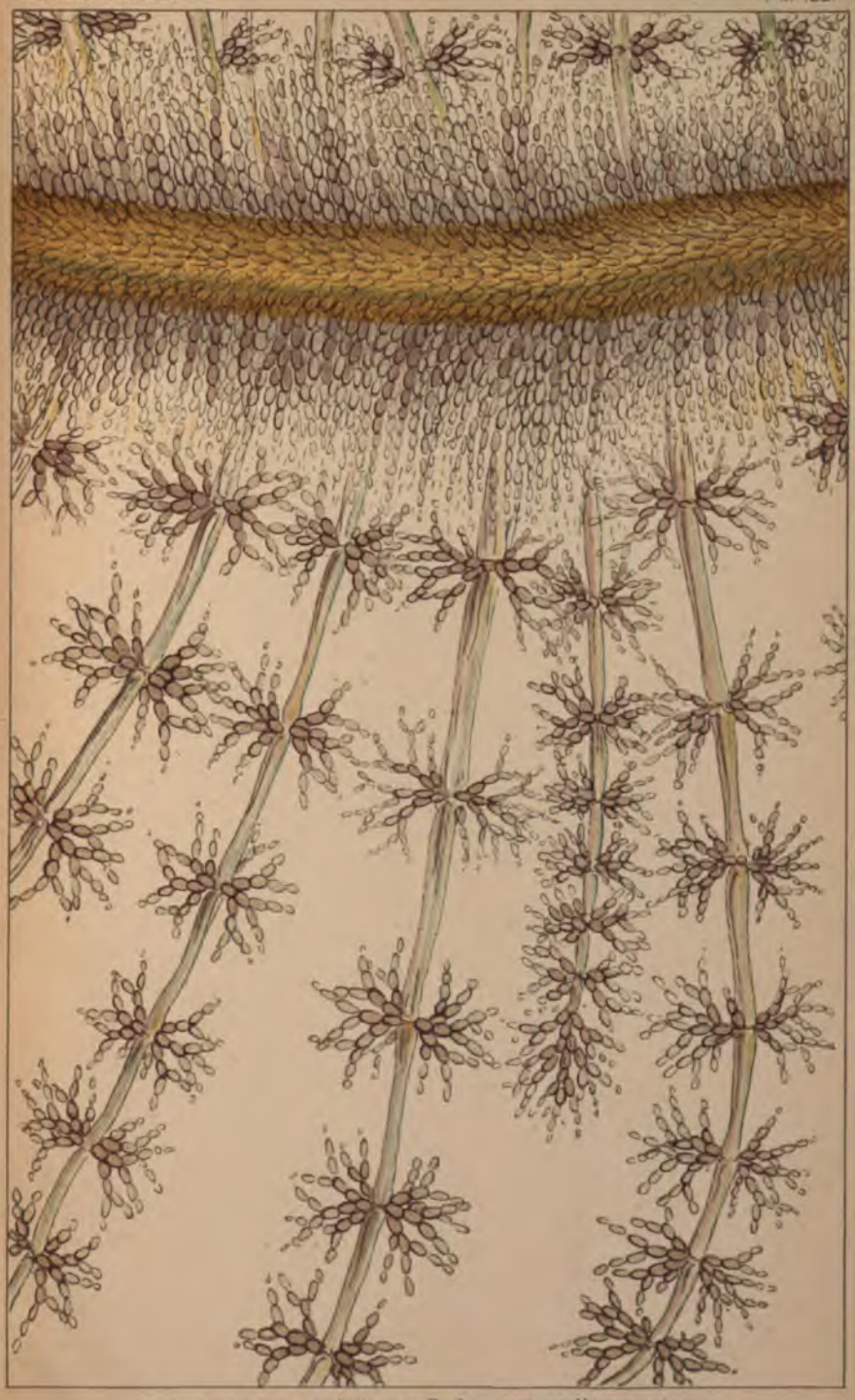
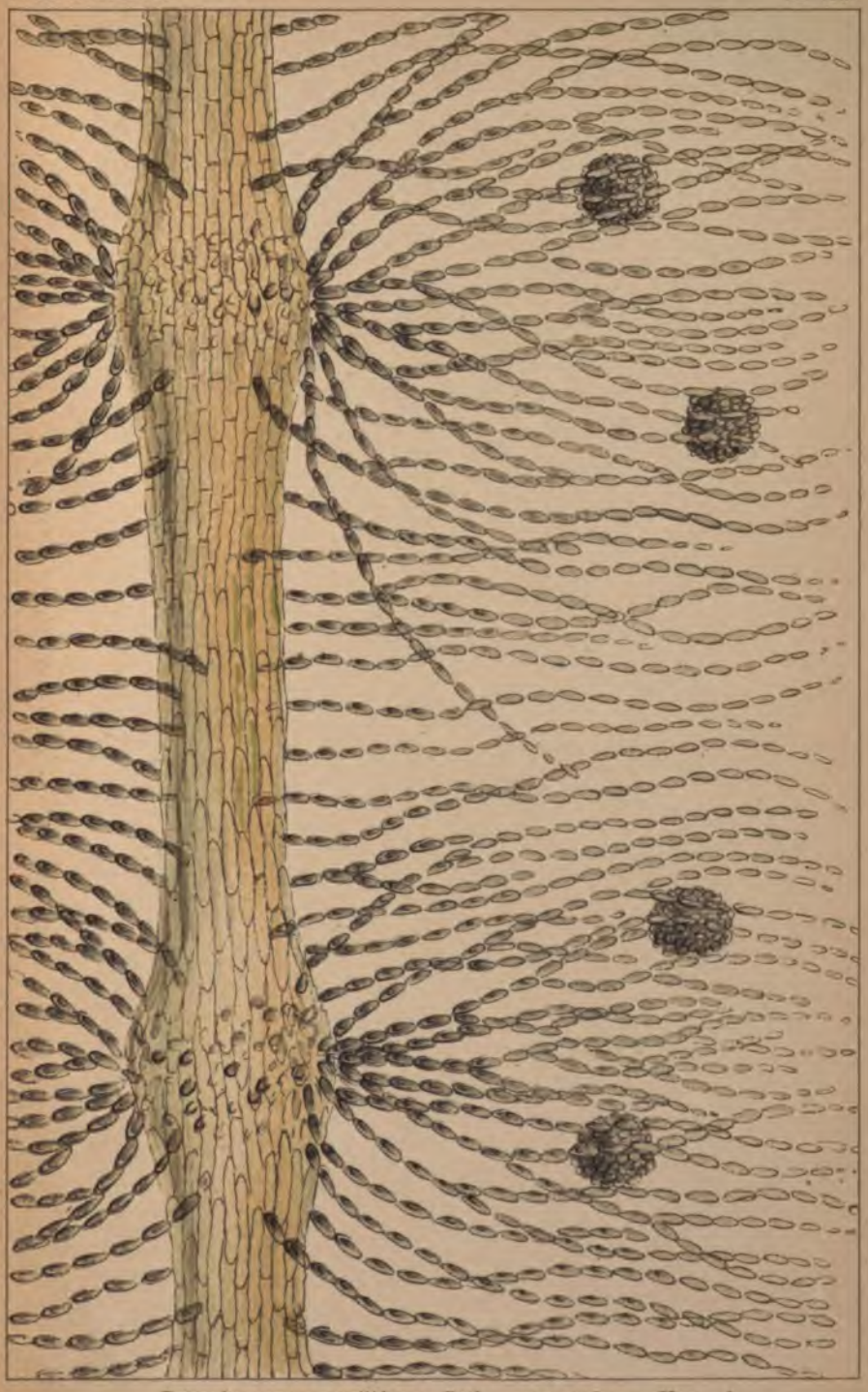


Batrachospermum moniliforme. Roth. var. proliferum. Carm.



Batrachospermum moniliforme. Roth. var. confusum. Hass.

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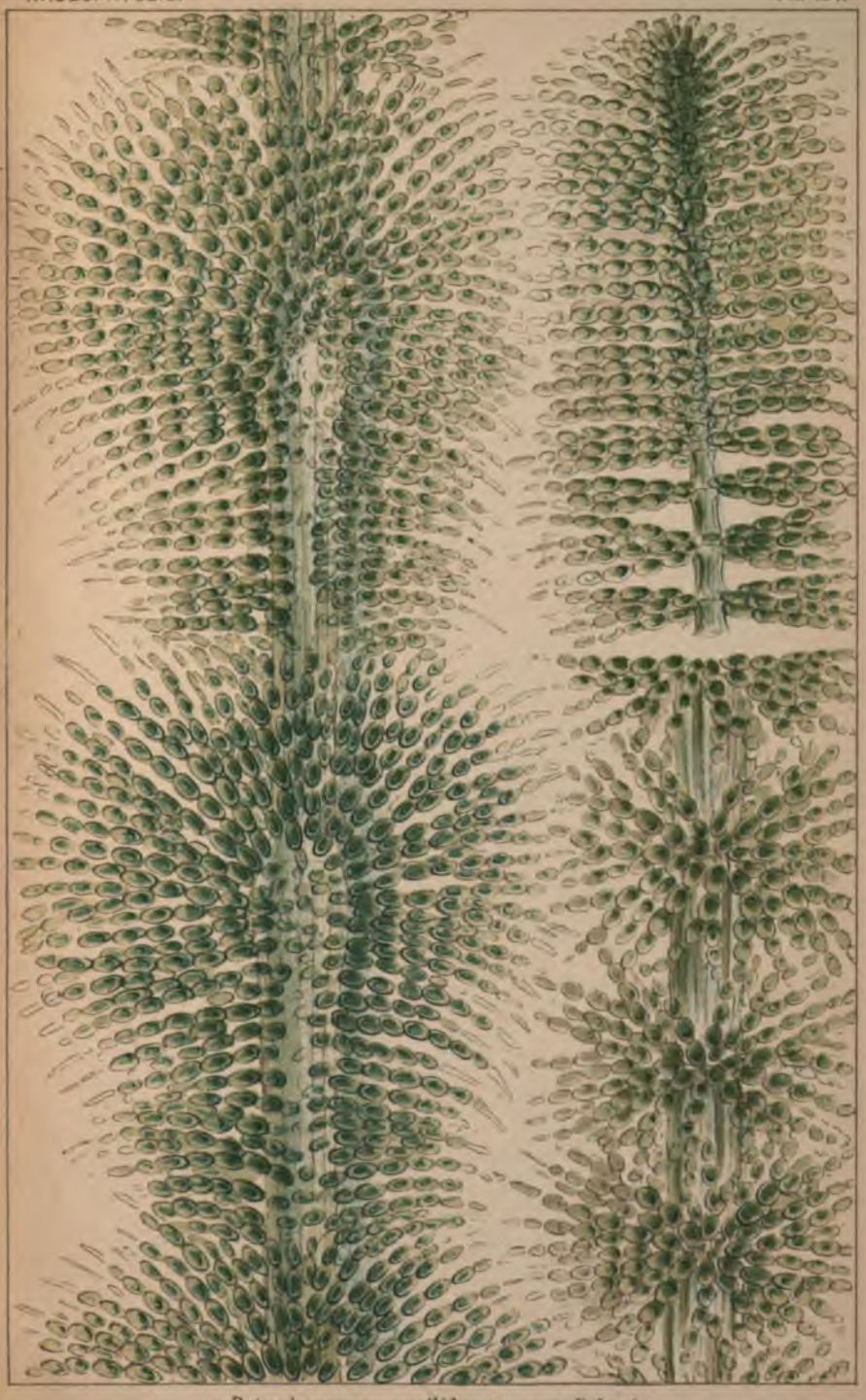
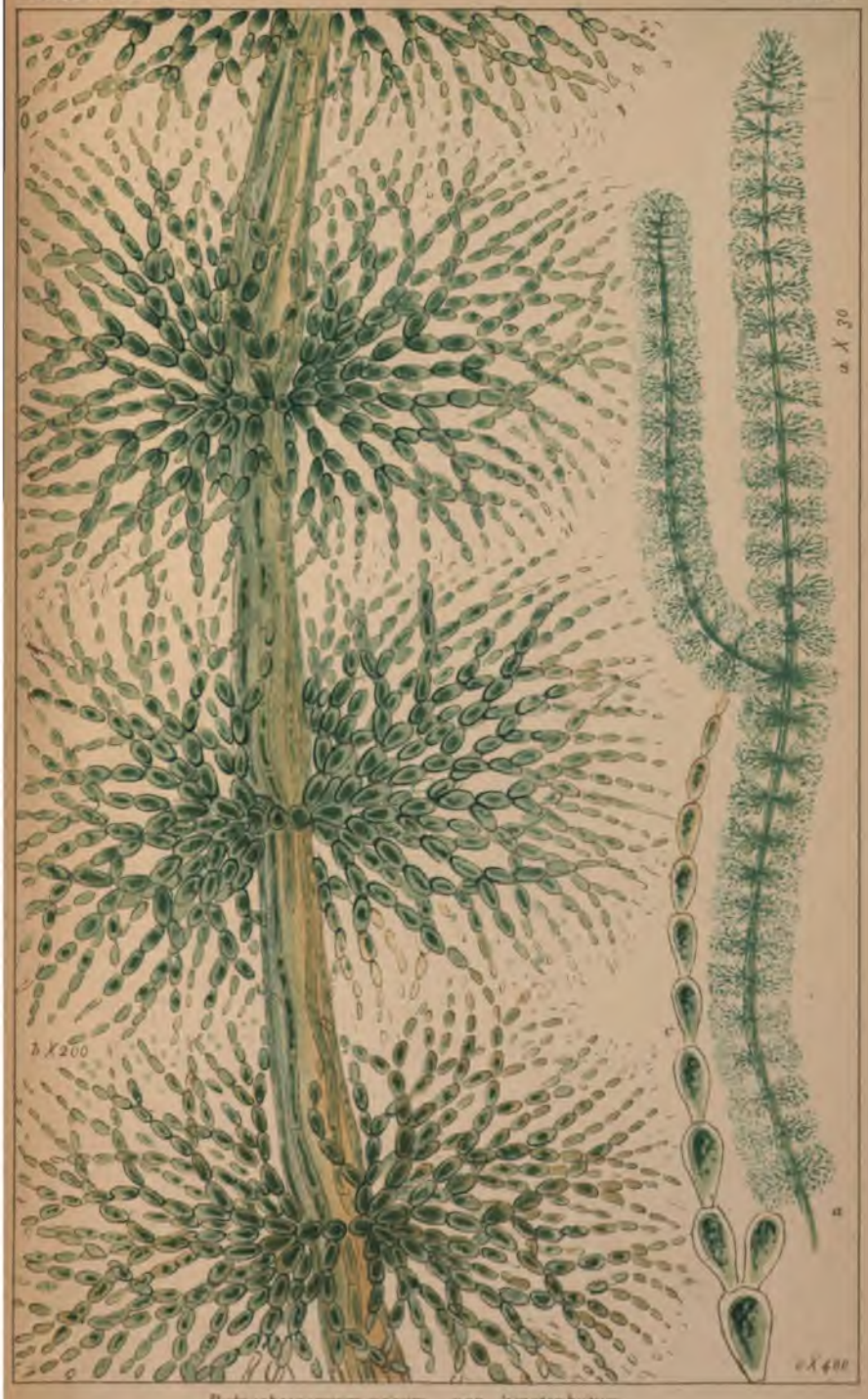
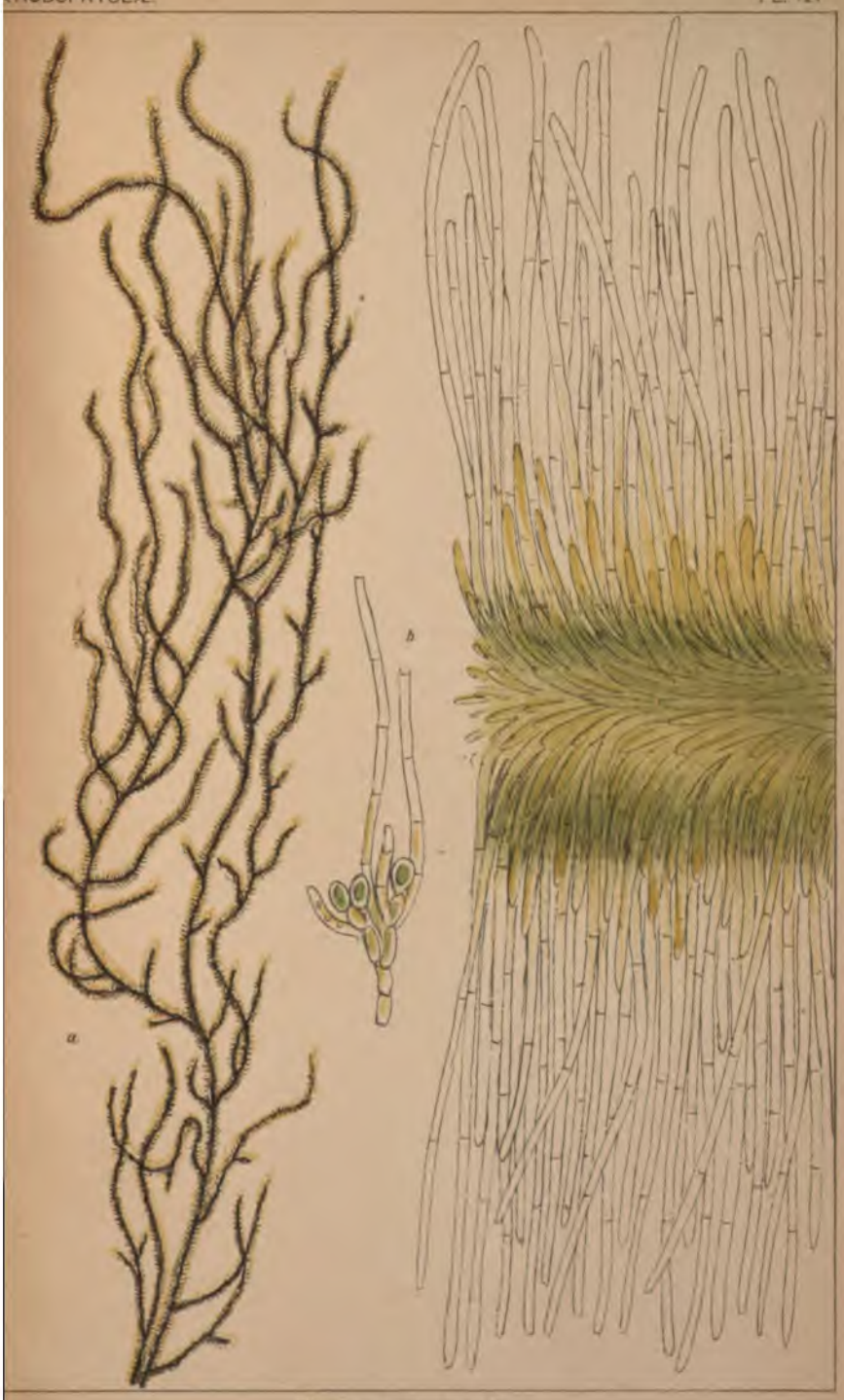


Batrachospermum moniliforme. var. *Boltoni.*

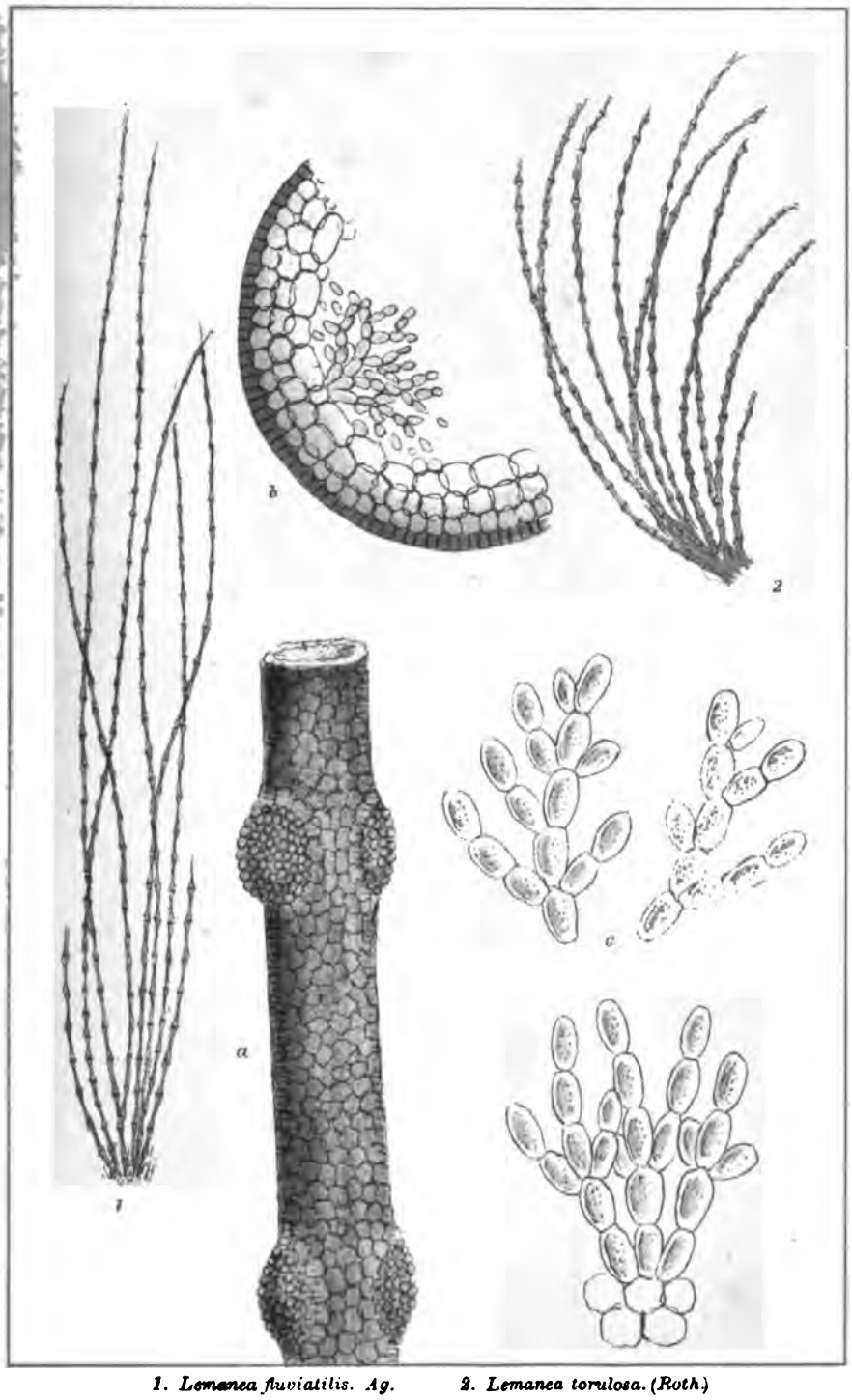


Batrachospermum vagum. var keratophytum.

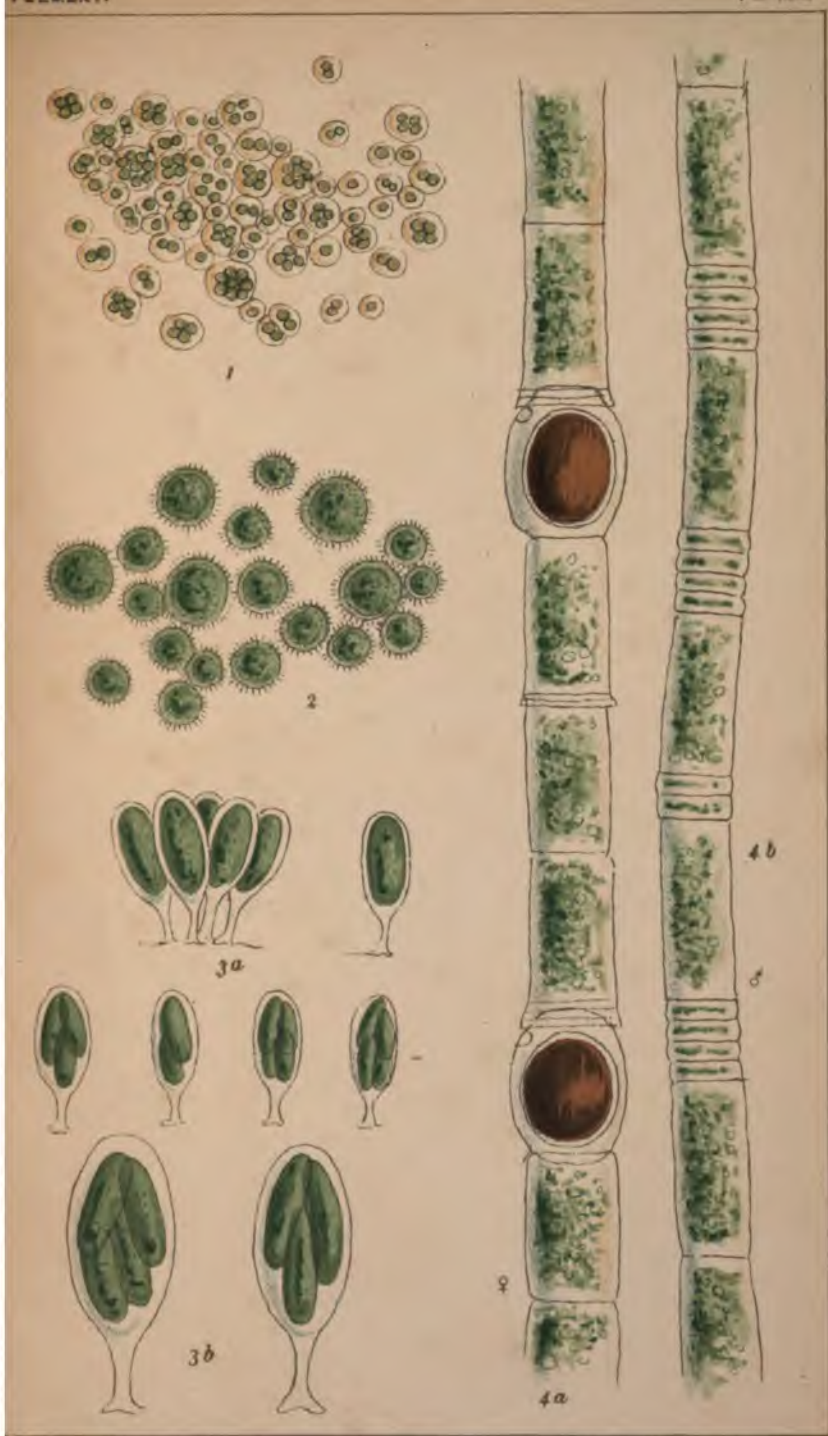
1. *Batrachospermum atrum. Harvey.* 2. *Batrachospermum Dillenii. Bory.*



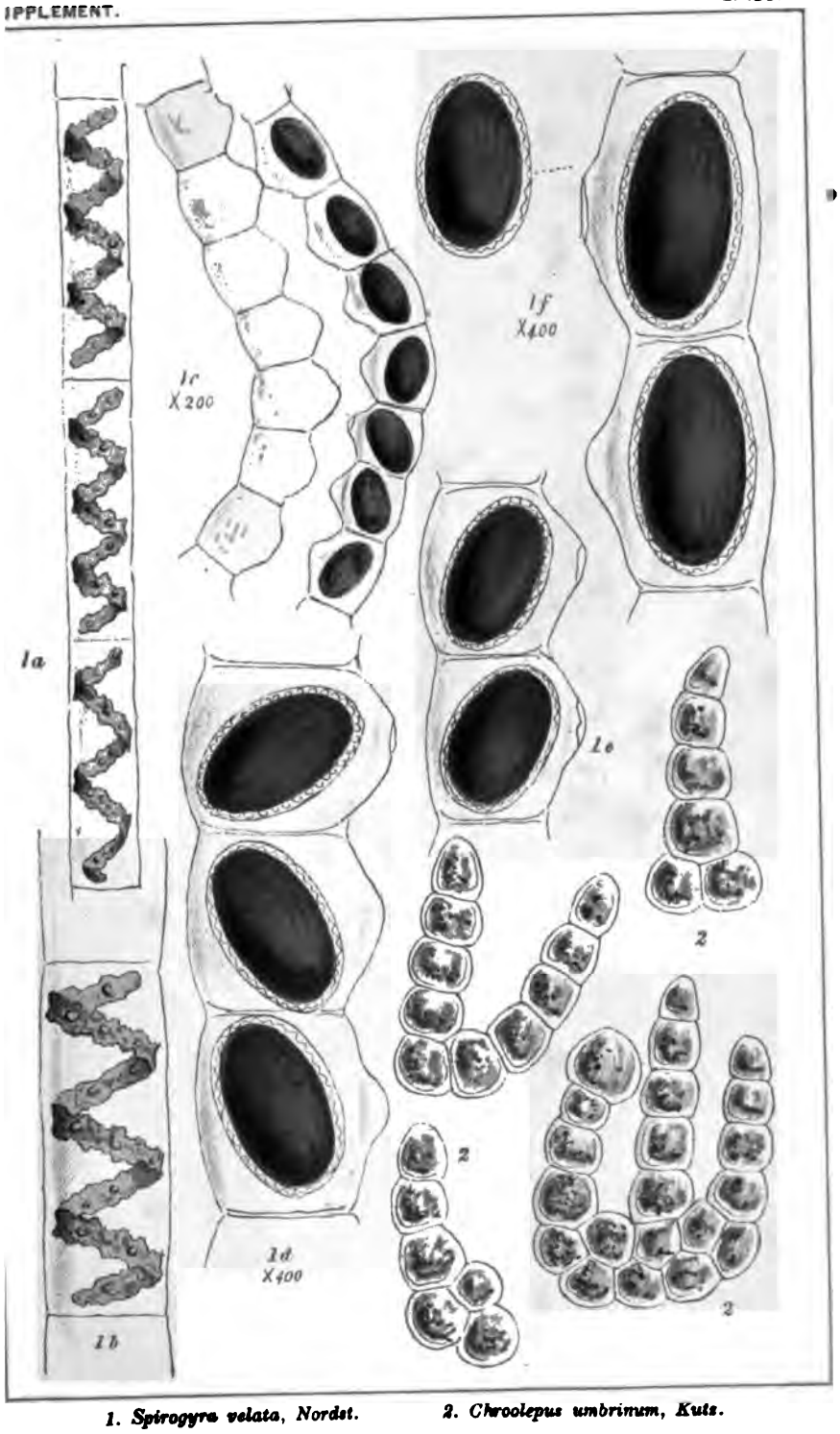
Thorea ramosissima. Bory.



1. Lemanea fluviatilis. Ag. *2. Lemanea torulosa. (Roth.)*



1. *Pleurococcus bituminosus, Bory.* 2. *Pleurococcus vestitus, Rein.*
3. *Dactylococcus Debaryanus, Rein.* 4. *Œdogonium capilliforme, Kutz.*



1. *Spirogyra velata*, Nordst. 2. *Chroolepus umbrinum*, Kutz.